EverFocus®

User Manual

PARAGON264x1-16CH DVR

EVERFOCUS ELECTRONICS CORPORATION

PARAGON264x1-16CH DVR

User Manual

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SAFETY PRECAUTIONS

Ventilation Slots: Do not block the ventilation openings or slots on the cover.

Limits for Temperature, Humidity and Power: Do not operate the device beyond its specified temperature, humidity or power source ratings. Do not use the device in environments with very high temperature or humidity. Use it at temperatures between -20~55ºC (-4~131ºF). The input power source for this device is 10~32VDC.

Servicing: Do not attempt to service this unit by yourself. Do not attempt to disassemble the device. Opening or removing covers may expose you to dangerous voltages and other hazards. There are no user-serviceable parts inside. Refer all work on this device to qualified service personnel. Handle the device with care. Do not strike or shake it, as this may damage the device.

Cleaning: Unplug the unit from the outlet before cleaning. Do not use strong or abrasive detergents when cleaning the device's cover. Use a damp cloth to clean the device when it is dirty. If the dirt is hard to remove, use a mild detergent and wipe gently.

Attached Devices: Do not attach devices that are not recommended by the manufacturer.

Power Outlets: Do not overload outlets and extension cords as this could cause fire or electric shock.

Power Cables: Power cables and their connectors should be placed where they are not likely to be walked on, crushed or pinched by items placed upon or against them.

Foreign Objects: Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short out parts, possibly resulting in fire or electric shock. Do not let any metallic parts drop through the slots, as this could permanently damage the device. If this happens accidentally, turn the power off immediately and contact qualified service personnel for support.

Liquids: Do not expose the device to water or moisture, and do not try to operate it in wet areas or near water – for example: near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, etc. Take immediate action if the device becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture can damage the device and can also cause electric shock. Never spill liquid of any kind on the unit.

Read All Instructions: All the safety and operating instructions should be read before the unit is operated.

Retain These Instructions: The safety and operating instructions should be retained for future reference.

Heed All Warnings and Follow All Instructions.

ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures :

•Reorient or relocate the receiving antenna.
•Increase the separation between the equipment and receiver.
•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
•Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the users' authority to operate this equipment.

WEEE

This Product is RoHS compliant.

The information in this manual was current upon publication. The manufacturer reserves the right to revise and improve his products. Therefore, all specifications are subject to change without prior notice. Manufacturer is not responsible for misprints or typographical errors.
Please read this manual carefully before installing and using this unit. Be sure to keep it handy for later reference.

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Chapter

1

1 PRODUCT OVERVIEW

The Paragon264x1 16-channel DVR has two hot-swappable Hard Drives and a DVD burner. It adds the advantages of H.264 compression to the power and flexibility of the already popular Paragon DVR. State-of-the-art H.264 compression techniques enhance video storage capacity and conserve network transmission bandwidth while maintaining high image quality. Comprehensive features and extended event recording settings enable a wide range of applications for this DVR. The Paragon264x1 16-channel DVR permits multiple control options. These include mouse control, front-panel control, IR remote control and control via the EverFocus keyboard (EKB500). These control options employ a simple Graphical User Interface (GUI) that echo standard computer GUIs and therefore make it easy for experienced PC users to intuitively grasp the DVR's configuration menus. As with computer-based software, this DVR's GUI lets users command specific actions and open configuration submenus by clicking (or scrolling&confirming) on graphical icons and visual indicators. Simply point, click and drag the playback bar on the screen to play back your recordings from any time slot. All GUI functions can be operated via the front-panel buttons or the mouse.
Hop on the Express Lane! This DVR is engineered for express operations, allowing you to configure all actions (like copy, search and recording playback actions) in seconds by simply clicking a few tabs on the Express menu page of the GUI.

1.1 FEATURES

• H.264 compression format for efficient disk utilization and network bandwidth conservation
• Real-time recording rate and playback rate for all cameras
• Normal and event recording frame rate can be set independently for each camera
• Multiple Main Monitors: VGA (800x600, 1280x1024*)/BNC Main monitor outputs
• Call monitor: additional composite BNC output with multiplex and/or sequenced views
• Simultaneous recording at D1 or 2CIF with real time streaming at CIF for remote web viewing to conserve bandwidth
• Pentaplex Operation (simultaneous live viewing, recording, playback, archiving and remote viewing)
• Free EverFocus DDNS Service – static IP address is not required for reliable remote access
• User-friendly GUI with graphical icons and visual indicators
• Supports eSATA external HDD
• Supports 3GPP for mobile monitoring
• Multiple Control Inputs: mouse / front panel / remote controller / EKB500 keyboard
• Built-in recording time calculator for quick recording estimations
• Express Setup: A unique menu option for quick & easy installation
• Express Archive: Archive video instantly (to USB) while playing back
• Express Playback: Simply point, click and drag the playback bar to view desired recordings
• Express Search: Use the intuitive playback bar with simple drag-and-drop operations
• Smart Search: Find recorded moments when movement occurred a specified area
• Snapshot search: Show snapshots of specified interval moments and scroll through
• Supports remote configuration via the built-in web interface

• 10/100M Ethernet interface for remote network viewing and control
• On-screen PTZ control via mouse or front panel
• Audio recording capabilities
• Supports up to 2 hot-swappable, internal HDDs*
• Supports 1 eSATA HDD (external HDD not hot-swappable)
• Built-in DVD burner
• 2 USB 2.0 ports (on front panel) for video archiving and mouse usage
• Multi-language support
• Watermark capabilities to identify intentional modifications to exported data
• Can be mounted on a 19" rack
• USB Mouse and IR remote control included

1.2 PACKAGE CONTENTS

Standard Package

-Digital Video Recorder x 1

-User Manual x 1

-AC Adapter and Power Cord x 1

-Mouse x 1

-19" Rack mounting adapters (pair) x 1

-CD with CMS Software and PDF of DVR and CMS User Guides

-Terminal Block x 6

-IR Remote Control x 1

-Battery x 2

-HDD Tray x 1

-Hot-swappable HDD key x 2

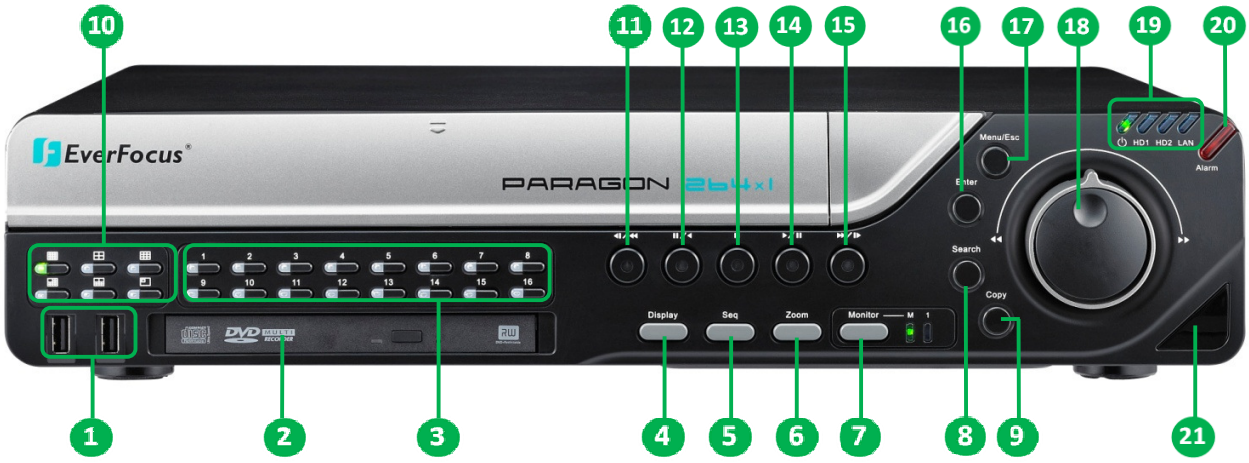
-Screws for HDD x 4

1.3 SPECIFICATIONS

Channel Number	16 CH
Compression Format	H.264
Recording Rate/ Resolution (Max. total – FPS rates per camera can be set independently up to the Max. total rate)	480 NTSC / 400 PAL (CIF) 240 NTSC / 200 PAL (2CIF) 120 NTSC / 100 PAL (D1)
Playback Rate/ Resolution	480 NTSC / 400 PAL (CIF) 240 NTSC / 200 PAL (2CIF) 120 NTSC / 100 PAL (D1)
Dual Streaming	Smart remote viewing of CIF or D1 stream
3GPP	Yes (RTSP stream)
Pentaplex Operation	Simultaneous Live, Recording, Playback, Archive and Remote Viewing
Camera Inputs	16 x BNC
Looping Camera Outputs	16 x BNC
Video Outputs	Main VGA/BNC; Multiplex Call BNC
Audio Input/Output (RCA)	4 Inputs / 1 Output
Recording Mode	Continuous, Event and Schedule
Playback Search	Time search, Event search, Smart search, Snapshot search
Alarm In	16 (One per Video Input)
Alarm Out	4 Alarm Outputs
Video Pause	Yes
Video Loss Detection	Yes
Motion Detection	Yes
Event Log	Yes
Watch Dog Timer	Yes
Internal HDD	2 Hot-swappable
External HDD	1 eSATA (external HDD not hot-swappable)
Built-in DVD Burner	Slim Type DVD Burner
User Interface	Mouse/Front-Panel Operated GUI (Graphical User Interface)
OS	Embedded Linux
Network/Protocol	10/100M Ethernet ; TCPIP/ DHCP/PPPoE/DDNS/SMTP/POP3/HTTP/SSL/RTSP/RTP/NTP
Control PTZ via OSD	Yes (via mouse or front-panel buttons)
USB	2 x USB 2.0 port on front panel
Schedule Setting	Supports Express and Advanced Schedule Settings
User Access	3 Levels of User Access Supported
RS-232	YES
RS-485	Terminal connector
Power Source	12VDC – Power Supply Included
Dimensions (L x W x H)	353.0 x 354.8 x 70.60 mm / 13.89" x 13.96" x 3.055"
Temperature	0°C~40°C / 32°F~104°F (20~80% humidity)
Certifications	CE, FCC, UL
Supported PTZ Protocols	EverFocus, Pelco D, Pelco P, Samsung, Transparent

1.4 FRONT PANEL

Your primary interaction with this DVR will be through the Front Panel buttons and their corresponding buttons on the included IR Remote Control. Take a moment to learn where the buttons are as the remainder of the manual will refer to them often.



1) **USB 2.0 ports (front):** For connecting USB flash drives to copy/archive video, or to do firmware upgrades. There's another USB port for connecting a USB mouse on the back panel.

2) **DVD+RW Burner.**

3) **Channel buttons 1~16**: Press a channel button to display that channel in full-screen view.

4) **Display:** Press this button to cycle between the info display types (channel and status bar info).

5) **Seq:** Press this button to enter the automatic sequence mode. This will show each channel feed in sequence. The dwell time can be set in the "Display Setting" tab of the Menu. For more details about this function, please see "Section 5.8.2 Display Setting > Main M/T SEQ".

6) **Zoom:** Press this button repeatedly to toggle between 2x and 4x zoom. Press the Menu/Esc button to switch zoom off.

7) **Monitor:** Press this button to switch between the main monitor and up to two call monitors. You can also press this button to switch between two main monitors (BNC and VGA) if you have such main monitors connected. Just remember to exit out of the setup menus before doing so.

8) **Search:** Press this button to enter the Search Menu. For more detail about the Search function, please see the "Search" section.

9) **Copy:** Press this button to enter the Copy Menu. For more details about the Copy function, please see the "Copy" section.

10) **Screen Layout:** Press the type of layout you want for displaying your channel feeds.

11) **Fast Reverse:** Press this button to play the recorded data in fast reverse. A green LED at the center of the button will turn on if this function is active. This reverse play speed will double every time you click the button until it reaches -32x reverse playing speed. If you click the button again after it reaches -32x speed, the speed will return to -1x reverse playing speed.

12) **Reverse Play/Pause:** Press this button to play the recorded data in reverse at normal speed. A green LED at the center of the button will turn on if this function is active. Press this button again to Pause the reverse playback. Press the Stop button to stop all playback actions and exit the playback area.

13) **Stop:** Press this button to stop either the Reverse, Fast Reverse, Play, and Fast Forward functions, if that function is active. This button stops all Play functions, but no Recording functions.

14) **Play/Pause:** Press this button to play the recorded data forward. A green LED at the center of the button will turn on if this function is active. Press this button again to Pause the playback. Press the Stop button to stop all playback actions and exit the playback area.

15) **Fast Forward:** Press this button to play the recorded data in fast forward. A green LED at the center of the button will turn on if this function is active. This fast forward playing speed will double every time you click the button until it reaches 32x playing speed. If you click the button again after it reaches 32x playing speed, the speed will return to 1x playing speed.

16) **Enter:** Use this button in conjunction with the Menu/Esc button (17) and the Control Wheel (18) to select menu values or to scroll between menu categories. You can also use it in conjunction with a mouse or you can use only a mouse to do these functions.

17) **Menu/Esc:** Press this button to enter/exit the Main Setup Menu.

18) **Control Wheel:** Use this wheel in conjunction with the Enter button to toggle between menu options, or use it on its own to Fast/Slow Forward or Fast/Slow Rewind recorded material.

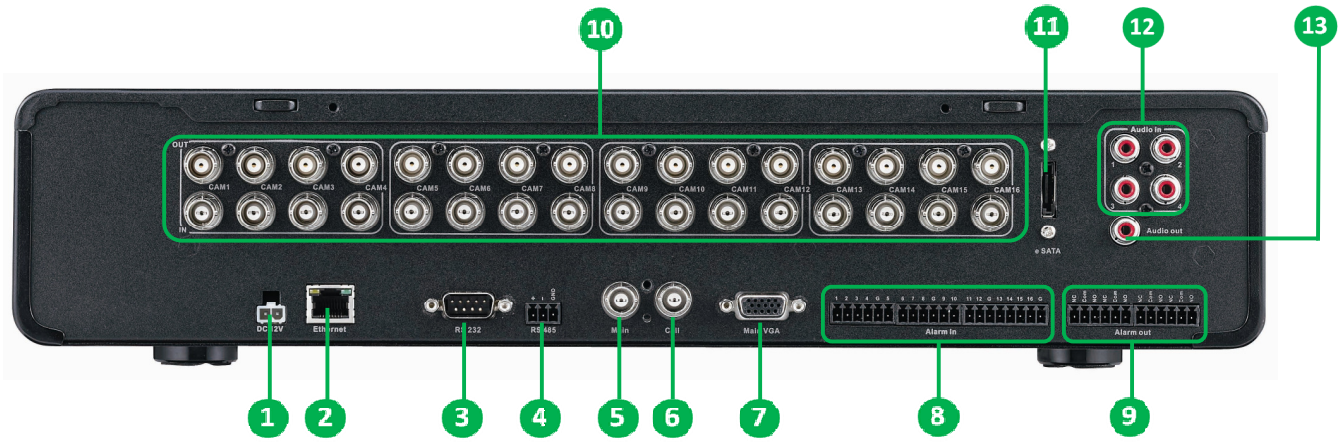
19) **Power:** If this LED is on, the DVR is on.
HD 1: If this LED is on, Hard Drive 1 is active.
HD2: If this LED is on, Hard Drive 2 is active.
LAN: If this LED is on, the Network is active.

20) **Alarm:** If this LED is on, the alarm is active.

21) **Remote Control Receiver:** Receiver for signals from the IR remote control.

1.5 REAR PANEL

During initial setup you will be connecting your DVR to multiple input and output devices. This is done via the rear panel.



1) **Power Plug:** Plug the DC 12V power source provided into the power socket.
2) **Network Port:** RJ-45 port for 10/100Mbps Ethernet. There are two LEDs on the Ethernet connector. When the green LED is on, the network connection is active. The amber LED flickers when data is being exchanged.
3) **RS-232 Connector:** This 9-pin D-Sub is for attaching RS-232 control devices.
4) **RS-485 Connector:** For external control via connected RS-485 keyboards and for on-screen-display control of attached PTZ devices.
5) **Main:** This BNC port is for feeding the Main Monitor video Out signal to a BNC monitor.
6) **Call:** This BNC port is the Call Monitor output.
7) **Main VGA:** This VGA port is for feeding the Main Monitor video Out signal to a VGA monitor (Main Monitor).
8) **Alarm In:** Connect up to 16 alarm input devices.
9) **Alarm Out:** Connect up to 4 alarm output devices. The connection options are COM, N.C, and N.O types of alarm out (form “C”).
10) **Video IN and Video OUT connectors:** Connect up to 16 cameras to the Video IN connectors (top layer). You can also connect equipment like monitors to the Video OUT connectors (bottom layer).
11) **eSATA:** Used for connecting an external SATA HDD bay.
12) **Audio IN:** Connect up to four Audio IN cables. Connect the line level output of an audio preamplifier to the audio input connection of your choice.
13) **Audio OUT:** Only one Audio OUT cable can be connected. Connect to the line level input of an audio amplifier.

1.6 VIDEO INPUTS/OUTPUTS INSTALLATION

Cameras and CCTV monitors must use copper-core or copper-braid 75 Ohm video cable (e.g. RG-59, RG-6, RG-11) with BNC connectors.

To avoid impedance mismatching and undesired loss/reflections, 50 Ohm coax cable (e.g. RG-58), or 75 ohm foil shield antenna cable and other types of coaxial cable should not be used.

All connected video sources must provide a 1 Vpp NTSC or PAL standard video signal.

When converting other transmission types (twisted pair, fiber optics, radio) for the video inputs, be sure to verify accurate receiver calibration and signal levels.

ATTENTION: In order for the system to auto-detect the appropriate video format (NTSC or PAL), make sure that there is a video signal on video input 1 (Channel 1) upon power-up.

1.7 AUDIO INSTALLATION

This DVR provides 4 line level audio inputs and 1 line level audio output.

ATTENTION: The direct connection of a non-amplified microphone is not supported (a microphone amplifier is required). The audio output requires an amplifier to drive a speaker or headphones.

The audio installation must be done with audio coax cable and RCA plugs.

AUDIO RECORDING FUNCTIONALITY:

Audio recording is activated / deactivated in the Camera Menu for each camera respectively. Please check and always comply with local laws and regulations when using audio recording.

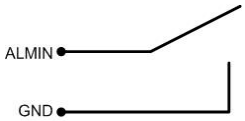
The audio channel is recorded with the video channel and is independent of the image recording rate. Audio recording is standard and do not require any further setup.

1.8 ALARM CONTACTS INSTALLATION

The alarm inputs can be configured to trigger recording or to adjust recording rates. Alarm inputs can also trigger the related camera's feed to be displayed on the monitor, or trigger a buzzer, an e-mail or a network alarm. The alarm output relay can be enabled if required. Alarm-input reactions can be controlled according to a flexible schedule.

1.8.1 Alarm Input Contacts

This DVR provides one alarm input per camera. All inputs are programmable N.O. (Normal Open) or N.C. (Normal Closed).



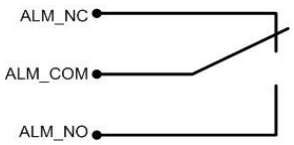
Alarm input with N.O. (Normal Open) contact in idle state

Alarm input with N.C. (Normal Closed) contact in idle state

All settings can be configured in the DVR's ALARM menu.

1.8.2 Alarm Output Relay

The relay output provides either Normally Open or Normally Closed dry contacts.



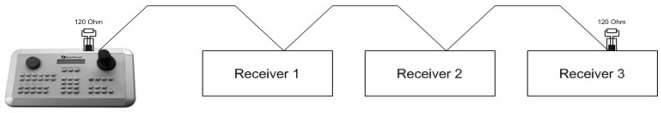
Output relay in idle state

1.9 RS-485 KEYBOARD / PTZ INSTALLATION

All functions can be remotely controlled by the EKB-500 universal keyboard. Using the EEPbus protocol, digital video recorders, keyboards and speed domes can be installed on one single RS-485 bus. One system can be comprised of up to 8 keyboards.

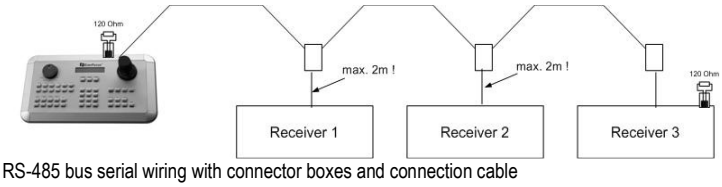
1.9.1 General RS-485 bus installation

The EKB-500 keyboard uses RS-485 simplex wiring; the signal is transferred via a single twisted pair line. CAT5 network cable is recommended. The UTP version (unshielded) is sufficient for normal applications. A shielded cable should be used if the installed cables are expected to be highly susceptible to interference.
The number of devices installed in one bus is limited to 32, and the maximum cable length is 3,900 feet. Both of these can be expanded using a signal distributor EverFocus Model EDA997A (see below).
Both the first and the last device in the series should be terminated with 120 Ohm resistance in order to minimize line reflections.



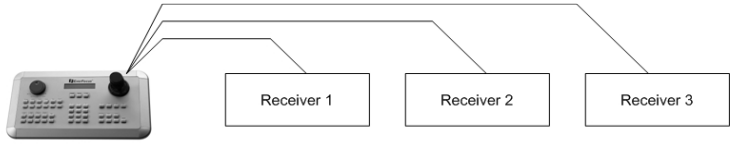
RS-485 bus serial wiring

Cable length from box to device („Stubs“) has to be limited to 2m using connector boxes.



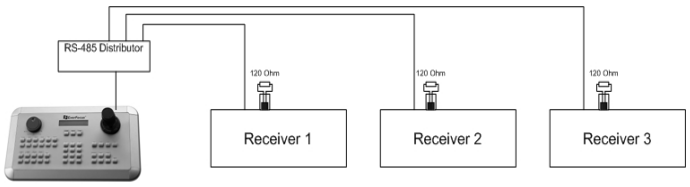
RS-485 bus serial wiring with connector boxes and connection cable

Direct RS-485 bus star wiring is not supported unless using an EverFocus Model EDA997A (see below).



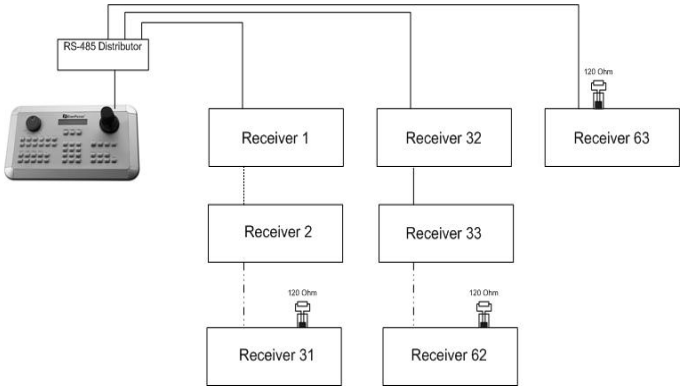
INCORRECT RS-485 bus star wiring!

An EDA997A RS-485 signal distributor may be used to use a star wiring configuration.



Star wiring with RS-485 signal distributor

An RS-485 distributor can also be used to increase the maximum number of devices on the bus as well as the total range. Each distributor output provides another RS-485 bus. This allows each output to extend an additional 1200m, and it also enables the additional connection of 31 further devices to each output (the output itself represents one device).
The maximum system expandability depends on the RS-485 address range of the installed devices.

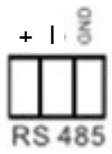


System expansion with RS-485 signal distributor

ATTENTION: EDA997A signal distributors are unidirectional! This means that the signal only flows from the input towards the outputs. Therefore, e.g. the interconnection of several keyboards is not possible with these types of signal distributor!

1.9.2 RS-485 socket pin assignment

The RS485 pin assignment is as follows:



1.9.3 EKB-500 connection with network patch cable

For a simple, short-distance installation, the DVR and keyboard can be connected directly using a standard CAT5 network cable with an 8-pin connector at only one end, and at the other end the Pin 3 wire connected to RS485 “+” (plus) and the pin 6 wire connected to RS-485 “-“ (minus).

1.9.4 EKB-500 connection to several DVRs

For long-distance installations connecting several DVRs, please use an EDA997A signal distributor to connect. For further details on keyboard connection, please refer to the EKB-500 manual.

RS-485 port communication settings are configured in the *I/O CONTROL* menu (Section 5.10.4 System Setup: I/O - control).

1.9.5 Speed Dome Installation

A speed dome or telemetry receiver's motor functions can be controlled through a web browser or the optional PowerCon software if the DVR is connected to a network. Local PTZ/telemetry control can be done via USB mouse or by the optional EKB-500 keyboard.

Supported protocols: EverFocus, Pelco-D, Pelco-P, Samsung, Transparent

Required DVR settings:
1) Enter the RS-485 receiver address (PTZ ID) in the ***Camera Setting > Basic Setting*** submenu of the Configuration menu.
2) Enter the RS-485 parameters and protocol in the ***System Setting > I/O Control*** submenu of the Configuration menu.

ATTENTION: Some Pelco-D / -P protocol domes and receivers require an address offset of -1, i.e. the address assigned to the dome / receiver in the DVR camera menu must be 1 below the address set in the dome / receiver itself!

1.10 USB MOUSE INSTALLATION

Connect the USB mouse to one of the two USB ports. (This can be done while the DVR is powered on).

NOTE: Recommended mouse types are the Logitech® and Microsoft® wired USB wheel-mice. Wireless USB mice are not supported.

1.11 NETWORK CONNECTION

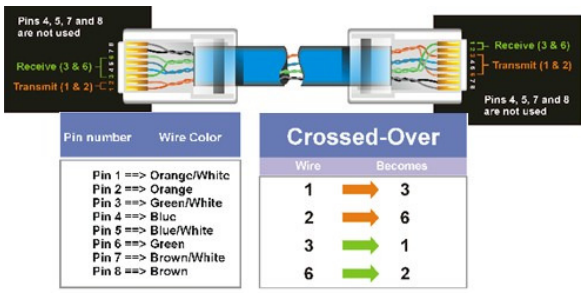
This section only describes the physical connection to an Ethernet network. This step must be completed before the DVR can connect to the network. There are two basic types of connection:

1.11.1 Direct PC Connection through Crossover Network Cable

The point-to-point connection of DVR and PC requires a crossover (crossed) network cable (Ethernet cable). This type of connection is ONLY used for direct connection to a single PC. Make sure that the PC is equipped with a 10/100Mbps compatible network connection.

Direct PC Connection:

Pinout of crossover-cable:

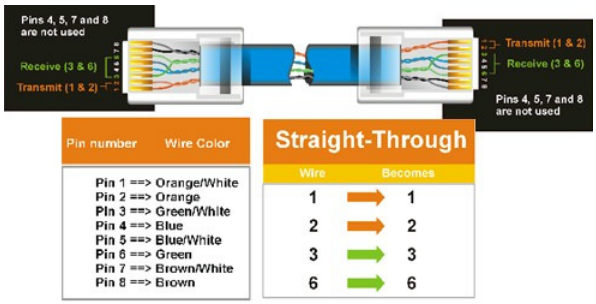


1.11.2 Network Connection through Patch Cable

The connection to an existing network requires a normal patch cable (straight-through). The illustration shows the connection to a network switch or router.

Network Connection through Patch Cable:

Pinout of straight patch cable:



1.12 FINAL INSTALLATION PROCESS

Once you have completed the basic wiring connections, you can turn on the DVR. Simply plug in the power source. The POWER LED will light up if power is normal. Once the system has finished loading, you can begin to set up the menu options for the DVR.

Chapter

2

2 USING THE MOUSE AND FRONT PANEL

This DVR supports multiple methods of control. It can be controlled with a mouse, the front panel buttons, an EKB500 keyboard, and the included handheld IR remote control.

This chapter will cover doing the basic control functions with the mouse and the front-panel buttons.

2.1 USING THE MOUSE

2.1.1 How to select a Channel and enable its Audio

1. In a screen layout that shows more than one channel, users can select a channel by clicking once on the desired channel's viewing square. The selected square will be highlighted by a white frame.
2. Double-clicking on a channel square will make it display in full screen. Double-click again to go back to multi-channel display.
3. This DVR has only one Audio Out line. To assign the audio feed of a specific channel to the Audio Out line, click the Audio icon ( ) at the lower left side of the screen. Every time you click this icon, the number in the icon will increase, indicating that a different channel's audio feed has been assigned to the Audio Out line (an audio icon will also be displayed in that channel's view box.). You can only listen to the audio feed of the channel whose number is displayed on the icon. After it reached number 16, if you click the audio icon again it will display a red line through it, meaning that Audio Out has been switched off. If you click the icon again, it will start at number one again and the process can be repeated.

2.1.2 Opening the OSD Root Menu

1. Right-click the mouse to open the DVR's menu bar (see the screenshot below). When you move the mouse over each icon, its title will be displayed at the top of the control bar.

OSD Root Menu:

2. Click on any icon to perform that action or open that submenu. These actions are covered in detail in Chapter 3.
3. Click the "X" in the top-right corner to close the DVR's menu bar.

2.1.3 Using the Configuration Menu's Submenus

Click on the icon to access the Configuration menu.

The Configuration menu screens are divided into 3 main sections.

1. The Top Bar shows the shortcut icons of the ten submenus of the Configuration menu. The blue frame around the Camera icon shows that the Camera submenu has been selected. The areas below the Top Bar will change every time a different icon is clicked, as these areas are submenu pages of the highlighted icon. Move the mouse over an icon and click to select it.

2. The Left Column shows the submenus for the selected submenu. Click on a choice to select it. The area to the right (the Main Body) will change every time a different submenu title is clicked, as this area is the configuration field of each menu item in the Left Column.

3. The Main Body shows all the options for the selected Left-Column submenu. Use your mouse clicker, remote controller, or the DVR's Menu/Esc and Enter keys to scroll and make changes.

2.1.4 Field Input Options

The following are examples of different types of fields available in the Configuration menu.

Text box: Click on the box and an on-screen keyboard will appear*. (See the note about the on-screen keyboard below.)

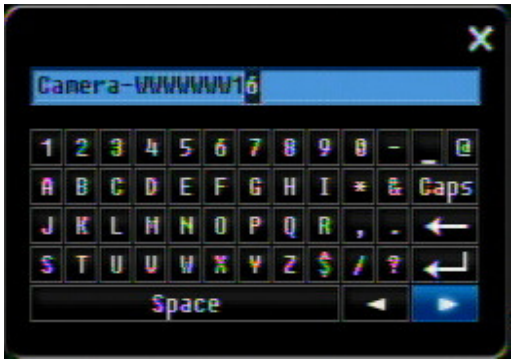
Dropdown option box: Click on the down arrow to see all the selectable options, then click on an option to select it.

Check box: Click on the box to enable it (checked) or disable it (unchecked).

Button: Click these buttons to activate their functions.

Slide bar: Click and drag the bar to the desired value.

*** Note about the on-screen keyboard:**
Click on a button to input that character.
The buttons on the right and bottom have the following functions:



Space	Enter a space
Caps	Switch to capital letters
←	Delete the letter
↵	Confirm the entry
►	Scroll to the right
◄	Scroll to the left

2.2 USING THE FRONT-PANEL BUTTONS

2.2.1 How to select a Channel and enable its Audio

1. In a screen layout that shows more than one channel, the user can flick the control wheel's outer ring left and right to scroll through the channel boxes. The selected channel box will be highlighted by a white frame. Scrolling sideways when the last / first camera (1 or 16) is highlighted, will select all cameras. Scroll again to select only one channel.
2. To assign a channel's audio feed to the DVR's single Audio Out line, highlight the channel and click the Enter button. A speaker icon will appear on the channel box, indicating that the channel's audio is assigned to the Audio Out line. This icon will disappear if it (Audio On) is activated in another channel box, because only one channel's audio feed can be assigned to the Audio Out line. Click Enter again to turn the channel's audio off (to "un-assign" it from the Audio Out line).

2.2.2 Opening the OSD Root Menu

1. Press the "Menu" key to display the DVR's menu bar. Flick the control wheel's outer ring to scroll over each icon. The title for each icon will be displayed at the top left of the menu bar.
2. Scroll to an icon and press the "Enter" key to perform that action or open that submenu. All actions are covered in detail in Chapter 3.
3. Press "Menu" again to close the DVR's menu bar.

2.2.3 Basic Principles of Front-Panel Button Navigation

The basic principle of navigating with the front-panel buttons is to use the control wheel's outer ring to scroll through the menu items. *If the outer ring cannot be used to scroll, it would indicate that the wheel's inner disk can and should be used to scroll* (as is the case with certain submenus). IN SOME CASES: *Use the control wheel's outer ring to scroll horizontally, and the inner disk to scroll vertically.* Use the "**Enter**" key to confirm a selection or enter the next menu level. Press the "**Menu**" key to open the Main Menu or to exit from the current menu level.

2.2.4 Navigating the Configuration Menu

Press "**Menu**", use the control wheel's outer ring to highlight the "Configuration" icon, and press "**Enter**" to open the Configuration menu.

NOTE: If the DVR has been set up to require a password, you will need to log in first. Refer to "Section **錯誤! 找不到參照來源。 錯誤! 找不到參照來源。**" for information on logging in. The menu (shown in the image below) is divided into 3 main sections.

1. The Top Bar shows the shortcut icons of the ten submenus of the Configuration menu. The blue frame around the Camera icon shows that the Camera submenu has been selected. Use the control wheel to highlight an icon and press "**Enter**" to select it.

2. The Left Column shows the submenus for the selected submenu. Use the inner part of the control wheel to highlight a menu item and press "**Enter**" to select it. The area to the right (the Main Body) will change every time a different submenu title is scroll/selected, as this area is the configuration field of each menu item in the Left Column.

3. The Main Body shows all the options for the selected submenu. Use the control wheel's inner and outer parts to move between items and press "**Enter**" to make changes to that item.

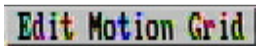
Note: Press the "**Menu**" button to go back to the previous menu section/level.

2.2.5 Field Input Options

Text box: When this type of field is highlighted, press the **Enter** key and an on-screen keyboard will appear*. (See the note about the on-screen keyboard below.)

Dropdown box: When this type of field is highlighted, press the **Enter** key to show the available options. Use the control wheel to highlight the desired option and press **Enter** again to select it.

Check box: When this type of field is highlighted, press the **Enter** key to enable the function (checked) or disable it (unchecked).

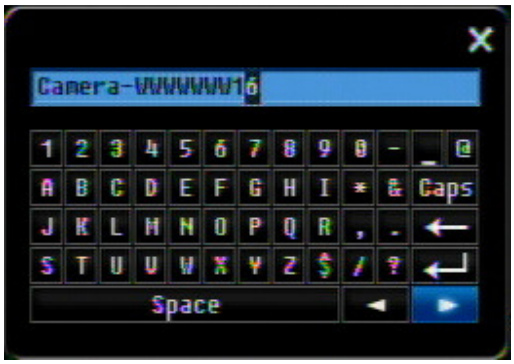


Button: When this type of field is highlighted, press the **Enter** key to activate the function.

Bar: When this type of field is highlighted, press the **Enter** key to activate the slider, then use the control wheel to adjust the value. Press **Enter** again to finalize the changes.

*** About the on-screen keyboard:**

Use the control wheel to highlight each character and press the "**Enter**" key on the front panel to input the selected characters. When finished, highlight the Confirm icon ( ) and press the "**Enter**" key on the front panel to confirm. The buttons on the right and bottom have the following functions:



Space	Enter a space
Caps	Switch to capital letters
←	Delete the letter
↵	Confirm the selection
►	Move to right
◄	Move to left

Chapter

3

3 GENERAL DVR OPERATIONS

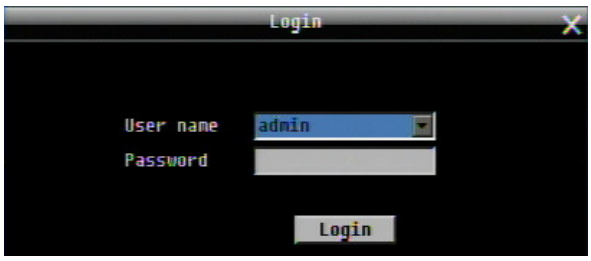
This chapter introduces the operations of major functions such as playback, layout changes, sequence, triplex operations, copy, and search.

3.1 RECORD

By default, the DVR will start to record all channel feeds when it is switched on the first time. This will only change after the following configuration actions:

1. The DVR will **not** record the feeds of any camera channels whose "Install" tabs (on their configuration pages) have been **un**checked. In addition, if an Installed camera's Record Mode has been set to "Event Only", the DVR will only record that camera's feed if a pre-specified Event occurs. (Refer to the Camera Setting section in the "The Configuration Submenu" chapter for more details.) **THUS, to start/stop recording a channel's feed, simply check/uncheck the "Install" tab on that camera's setup page (and make sure that the Record Mode is set to "Normal+Event" if you want the camera to record continuously).**
2. **If** a recording **schedule** or event is configured and activated (check the "**Schedule Record"** box on the Record & Play > Record menu page to activate the schedule), **the DVR will follow the recording settings of the schedule**, and only record if the schedule parameters have been met. Uncheck the "Schedule Record" box to return to independent recording (i.e. Event Only or Normal+Event).

3.2 LOGIN



In order to access the DVR's control software, users may be asked to log in for ID and authority identification. To log in, follow these steps.

1. Right-click on the screen or press the Menu button to display the Main Menu.

2. Click on the Configuration icon (or scroll to it and press the "**Enter**" key) to bring up the following screen:

3. Select the username from the drop-down list and input the password. The defaults are:

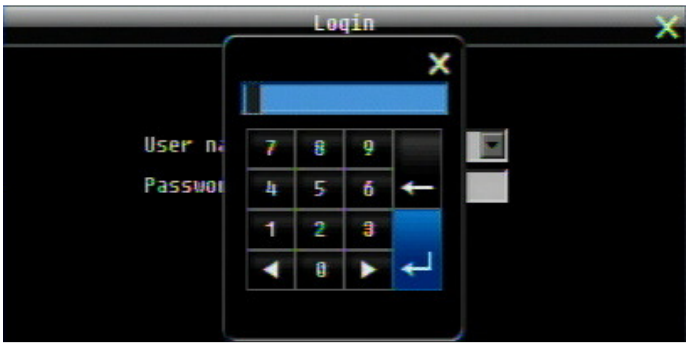
Username: admin (lower case)

Password: 11111111

- To input the password with the mouse: Click on the password field to bring up the on-screen keyboard. Click on each button to input the desired characters for the password. When finished, click the Confirm icon ( ) to save and exit.

- To input the password with the front-panel buttons: Use the control wheel to highlight each character and press the "**Enter**" key on the front panel to input the selected characters. When finished, highlight the Confirm icon ( ) and press the "**Enter**" key on the front panel to confirm, save and exit the keyboard.

4. Click on the "*Login*" button to log into the system (or scroll to it and press the "**Enter**" key).



The On-screen Login Keypad

3.3 SELECT A CAMERA FOR CONFIGURATION

The PARAGON264x1 is a "pentaplex" DVR (simultaneous live viewing, recording, playback, archiving and remote viewing of multiple channels) and users can control and configure each camera individually. To select a camera (for configuration) on the multi-channel view screen:

Mouse: Click on the desired channel box. A white frame will appear around the selected channel box, indicating that the channel's camera has been selected.

Front-panel buttons: Use the control wheel's outer ring to scroll through the channel boxes. The selected channel box will be highlighted by a white frame. Scrolling sideways when the last / first camera (1 or 16) is highlighted, will select all cameras. Scroll again to select only one channel.

3.4 ASSIGN 'AUDIO OUT' TO ONE CHANNEL

Use the mouse/keys to select a camera and press the "**Enter**" button on the front panel to switch the audio output on and off for that camera. An audio icon will appear in the selected channel box. This channel's audio feed will now be able to play through the DVR's single Audio Out jack. The audio source and/or audio output amplifier have to be connected properly in order to utilize the Audio Out functions. Please make sure the "Record Audio" option on the Camera 1 Basic Settings setup menu page is ON if audio recording is required. Also, the audio source and/or audio output amplifier have to be connected properly in order to utilize the audio functions.

Chapter

4

4 MAIN MENU BAR

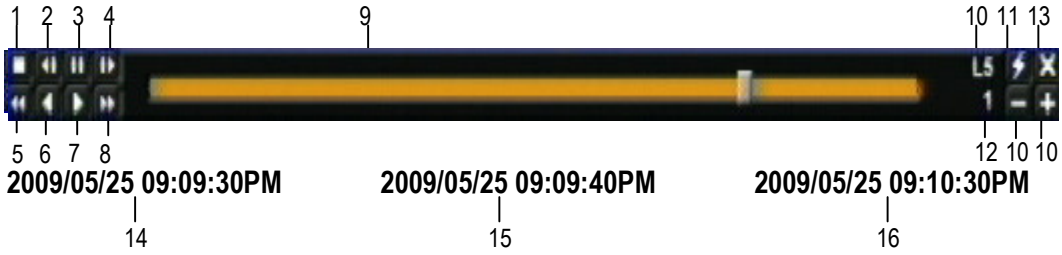
4.1 PLAYBACK

The playback bar is the fastest way to show footage from the exact time in the selected channel's recorded footage that the user wants to see. The playback bar allows a user to see the timeline **of a selected channel** and the current playback moment (indicated by the bar's slider tab and its time indicator below the bar). The user can then click the timeline to move the slider tab to the position (moment in time) that he/she wants to view. The operation is as follows:

With mouse: Click on the *desired channel to select/highlight* it, then right-click to bring up *the channel's* menu bar and click on to open the channel's **Playback Bar**.

With the front-panel controls: *Highlight the desired channel*, then press the front-panel Play button to open *the channel's* **Playback Bar**.

The playback bar will appear at the bottom of the screen (see the image below):



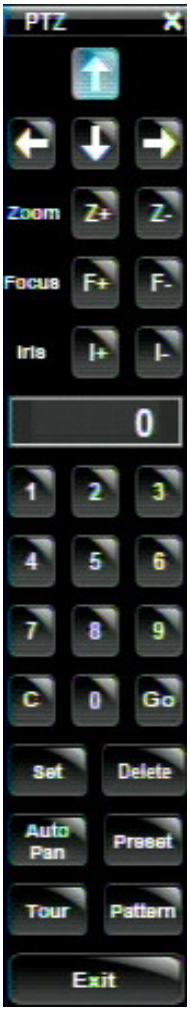
1. Stop key: Click to stop playback
2. Frame Reverse key: Click to go back one frame per click
3. Pause key: Click to pause playback
4. Frame Forward key: Click to go forward one frame per click
5. Fast Reverse key: Click to start fast reverse playback
6. Reverse key: Click to start reverse playback
7. Play key: Click to start forward playback
8. Fast Forward key: press to start fast forward playback
9. Time bar: Move the slider tab on the time bar to the select the moment from where you want to start playing the footage (The start time and end time of the time bar appears below the bar – to the left and right). The status of each camera is represented by different colors on the time bar. Green indicates a normal recording period; orange indicates a motion-

event recording period; blue indicates a video-loss-event recording period, red indicates an alarm-event recording period.

10. The "+" and "-" signs are used to decrease or increase the time scale of the time bar. Press "+" or "-" to select between scale levels L1 ~ L5. When changing between these levels, the start time and end time of the time bar will change.
    L1: The bar's length represents 2 days of recorded footage
    L2: The bar's length represents 30 hours of recorded footage
    L3: The bar's length represents 1 hour of recorded footage
    L4: The bar's length represents 10 minutes of recorded footage
    L5: The bar's length represents 1 minute of recorded footage
11. Express copy: Press this icon to start copying to a connected device while the camera is in playback mode
12. Playback speed indicator
13. Press "X" to close the playback bar. This will allow the Play or Back functions to continue, if they are active.
14. Start date/time of the time bar (the left-most point of the time bar)
15. Current playback moment (the time indicated by the slider)
16. End date/time of the time bar (the right-most point of the time bar)

4.2 PTZ

4.2.1 PTZ Control (for PTZ devices only)



Once you have selected the PTZ camera of your choice, right-click to bring up the menu bar and click on the PTZ dome icon to open that channel full-screen and display the camera's **PTZ Control Bar** (see the image on the right).

The following actions can be performed using the PTZ Menu:
1. Use the Direction Arrows (up, down, left, right) to move the camera to the desired direction and angle.
2. **Zoom**: Click "**Z+"** to zoom in, or "**Z-"** to zoom out.
3. **Focus**: Click "**F+**" to focus far, or click "**F-**" to focus near.
4. **Iris**: Increase the amount of light by clicking "**I+**" or decrease it by clicking "**I-**".
5. To *program* a preset position (if supported by the camera)
    a. Move the PTZ camera to the desired position
    b. Click the "**Preset**" button
    c. Click the number of the desired position (this will be displayed in the preset ID number box)
    d. Click the "**Set**" button
6. To *jump* to a preset position
    a. Click the "**Preset**" button
    b. Click the number of the desired position
    c. Click the "**Go**" button (under the "9" button)
7. *Shortcut jump* to presets #1-9
    a. Click the desired number's button without clicking any other buttons
    b. The camera will automatically jump to that preset position
8. Steps to delete a preset position (if supported by the camera)
    a. Click the "**Preset**" button
    b. Click the number of the desired position
    c. Click the "**Delete**" button
9. For Auto Pan

a. Click the "**Auto Pan**" button

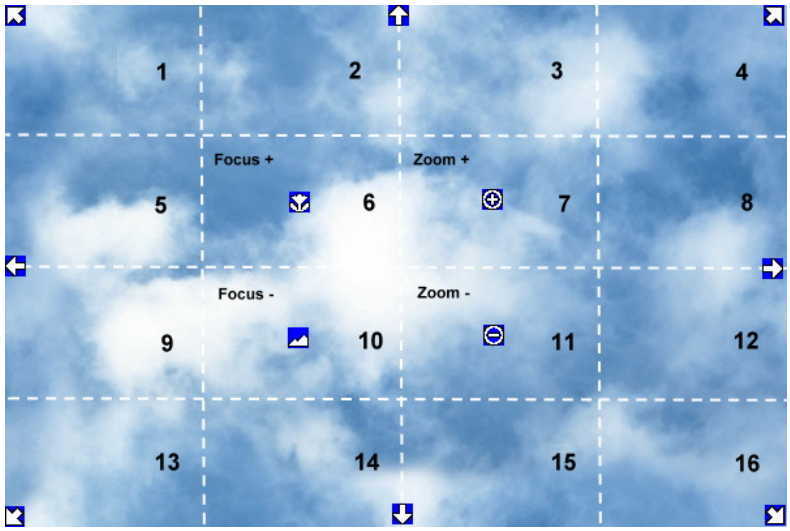
10. For Pattern (Pattern is the "0" Tour in Everfocus and Pelco PTZ cameras)
    a. Click the "**Pattern**" button
    b. If more than one pattern has been programmed, click the number of the desired pattern
    c. Click the "**Go**" button
11. To run a Tour
    a. Click the "**Tour**" button
    b. Click the number of the desired tour
    c. Click the "**Go**" button
12. To remove a Tour (if supported by the camera)
    a. Click the "**Tour**" button
    b. Click the number of the desired tour
    c. Click the "**Delete**" button

Click "**C**" to clear the digit in the number display
Click "**X**" at the top-right corner to hide the PTZ menu (see Express control below)
Click "**Exit**" to leave the PTZ Control bar.
REMEMBER: "**X**" only HIDES the PTZ control panel. "**EXIT**" **closes the panel *and* exits PTZ mode! Other controls will not respond until you EXIT the PTZ mode!**

4.2.2 PTZ Express Control

If the *PTZ Control Bar* has first been opened and then *HIDDEN*, the mouse can be used to control basic PTZ functions (Quick Mouse Control). The mouse cursor will change to different icons when held in different areas of the screen (the areas are shown in the image below). Simply click to activate the function represented by the mouse cursor-icon. With Quick Mouse Control, the user can control PTZ direction, zoom, and focus by clicking directly on the screen. The screen is divided into 16 areas, with the 12 outside blocks representing the direction controls. The 4 inside blocks represent the zoom and focus controls. Right-click to display the PTZ Control Bar again.

Right: The PTZ Express Control areas:



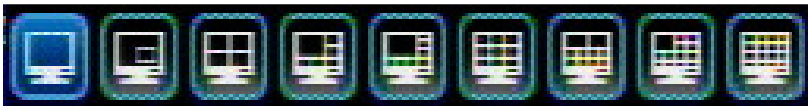
The screen is divided into a 4x4 grid. The function of each section is defined as below:

- 1: PTZ pan/tilt left and up
- 2, 3: PTZ tilt up
- 4: PTZ pan/tilt right and up
- 5, 9: PTZ pan left
- 8,12: PTZ pan right
- 13: PTZ pan/tilt left and down
- 14, 15: PTZ tilt down
- 16: PTZ pan/tilt right and down
- 6: Focus close
- 10: Focus far
- 7: Zoom in
- 11: Zoom out

REMEMBER: Clicking "**X**" at the top-right corner of the PTZ Control Bar **only hides the PTZ menu. You have to click "Exit" if you want to leave the PTZ function and enable the normal controls.**

4.3 LAYOUT

This DVR offers several display modes, similar to the ones shown below:



NOTE: PIP (Picture in Picture) display is not available in Playback mode

To change the layout, follow the steps below:

With the mouse: Right-click to bring up the menu bar and click , then click on the desired layout choice.

With the front panel: Push one of the six Layout buttons on the front panel that is closest to the layout you want.

4.3.1 Opening a Channel to Full-Screen

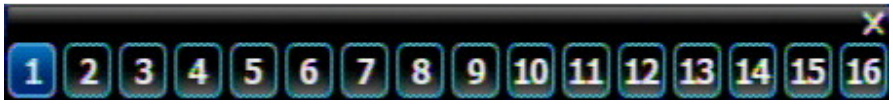
Mouse: Double left-click on the selected channel to put that camera in full-screen mode. Double left-click again on the screen to return to the multi-channel layout.

Front Panel: Press any channel selector button to bring that channel to full-screen mode. Click any of the six Layout buttons to return to a multi-channel layout.

4.4 SWITCHING CHANNEL POSITIONS

Use this function to switch channel positions within a multi-channel display or sequence

1. Pre-select a camera
2. Press the Channel ("switch") button .
3. On the Channel bar, click on the channel position number you wish to assign to the selected channel. The camera channel displayed in that position will be switched to that of the pre-selected channel.



EXAMPLE: If you select camera1 and open the Channel menu bar and choose camera10, then camera10 will be displayed in Position 1, and camera1 will be displayed in Position 10. ***NOTE****: if, for example, you later switch camera16 with camera1, camera16 will be displayed in Position 10, and camera1 in Position 16. To eliminate confusion, show the camera channel ID numbers on-screen by pressing the front-panel Display button a few times (and make sure the screen shows the 16-channel simultaneous view by clicking the 16-channel-view shortcut button at the top left of the front panel).*

4.5 DISPLAY

Press the Display button on the menu by using the mouse or selecting this icon with the front panel keys and pressing 'Enter'. Pressing/clicking this icon repeatedly will cycle through the four OSD formats:

1. Press once to show camera information. See the table below for the meaning of the camera information icons.

Recording	Playback	Fast forward	Fast backward	Back	pause
Alarm	Motion	Video loss	Express copy	Audio out	

2. Press again to show status information. See the table below for the meaning of the status icons.

Alarm	Audio	Event	HDD failure	HD temp. too high	Seq.
Motion	Video loss	No network			

3. Press again to show both status information and camera information.

4. Press again to hide all information.

4.6 SEQUENCE (DISPLAY SEQUENCE)

1. Mouse: Click the Sequence button to enter the sequential switching mode. The DVR will display one channel at a time in full screen. The channels will be displayed in the sequence and for the amount of time as configured in the Configuration > Display Setting > Main M/T SEQ (or Call M/T SEQ) submenu. The default setting is channels 1~4 with a dwell time of 3 seconds each – repeated.
2. Front Panel: Press the "Seq" button on the front panel to enter the sequential switching mode. The DVR will display one channel at a time in full screen. The channels will be displayed in the sequence and for the amount of time as configured in the Configuration > Display Setting > Main M/T SEQ (or Call M/T SEQ) submenu.

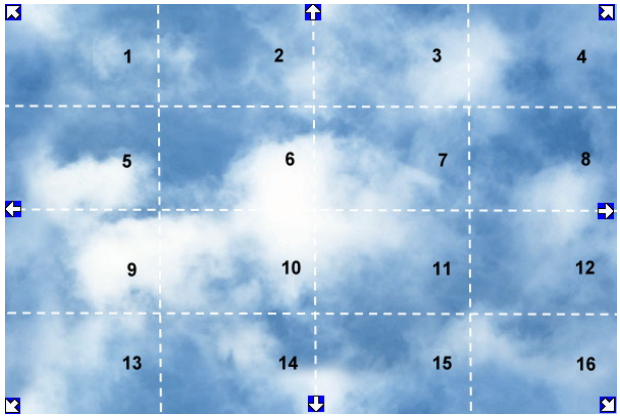
4.7 MONITOR

Use this submenu to configure the display settings of the Call Monitor. Click the Monitor ( ) icon on the Menu Bar and then right-click to see the 5-icon menu bar for the Call Monitor configuration options. The five option icons are Layout (click this to display four display option icons for the Call Monitor, and click the option you want to activate that display style on the Call Monitor), Channel (click this to display the channel switching bar and do the same as in section 4.4 above), Display (click multiple times to select the type of info display you want for the Call Monitor), Sequence (click to activate the Call M/T SEQ sequence configured in the Configuration > Display Setting > Call M/T SEQ submenu, click again to deactivate), and Monitor (click this to return to the normal Main Monitor status where right-clicking opens the normal Menu Bar).

4.8 ZOOM

1. Make sure no camera is in playback mode. To make sure, click the Playback icon and then click the square Stop button at the top right of the Playback Bar.
2. Select one camera
3. Right-click to bring up the menu bar and click the button. Or, press the ZOOM button on the front panel. This will display an 2x zoom view of the selected camera's view.
4. When in ZOOM mode, the mouse cursor will change to a different icon in different areas of the screen. To navigate to the now-hidden parts of the camera's view, move the cursor around the screen and click when the cursor turns into the direction arrow of your choice.

Right: The Zoom direction areas



The screen is divided into a 4x4 grid. When your mouse cursor is held in one of these sectors, clicking on it will move the screen in these directions:

- 1: Left and up
- 2, 3: Up
- 4: Right and up
- 5, 9: Left
- 8,12: Right
- 13: Left and down
- 14, 15: Down
- 16: Right and down
- 6, 7, 10, 11: Not used

4.9 SEARCH

Mouse: Right-click to bring up the menu bar and click to enter the **Search Menu**.

Front Panel: Press the "**Search**" key to enter the Search Menu directly.

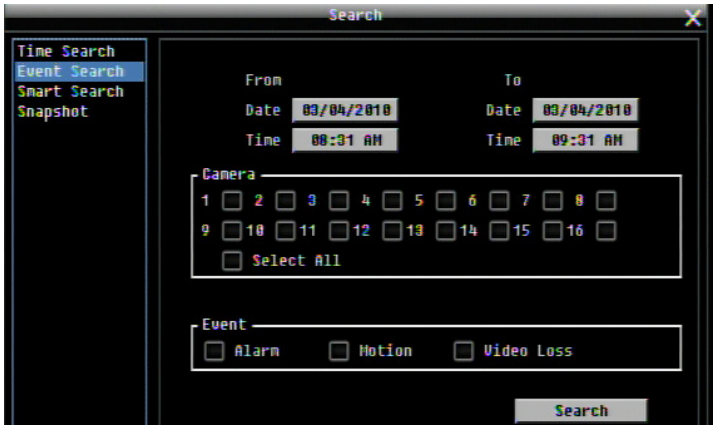
4.9.1 Time Search

Play From: Select the date and time from where the DVR should search (all channels).

Click on the "**Play**" button to start the search. The DVR will automatically begin to play the selected footage for all the installed channels. The DVR will play the nearest time if there is no footage of the selected time.

In Search Playback mode, pressing the "**Stop**" button will return the Search menu.

4.9.2 Event Search



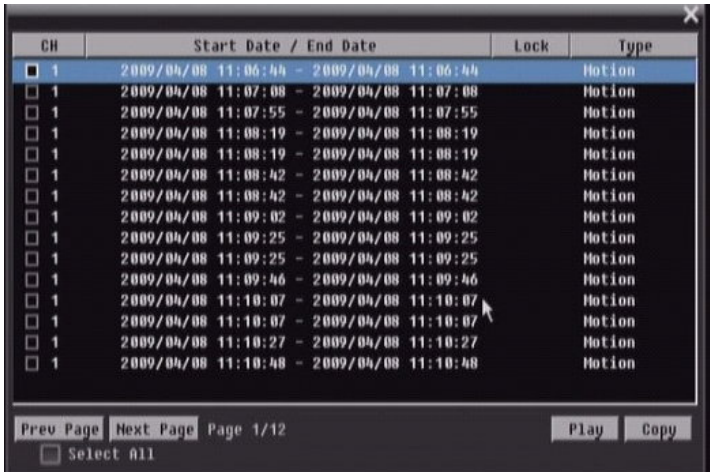
From: Select the start date and time of the period that the DVR should search for Event footage.

To: Select the end date and time of the period that the DVR should search for Event footage.

Camera: Select which cameras' footage to include in the search.

Event: Select which event type(s) to search for. Choose from Alarm, Motion or Video Loss.

Click on the "**Search**" button to start searching. The search results will be shown as a list of events (see the image on the right).



Prev Page: Go to the previous page

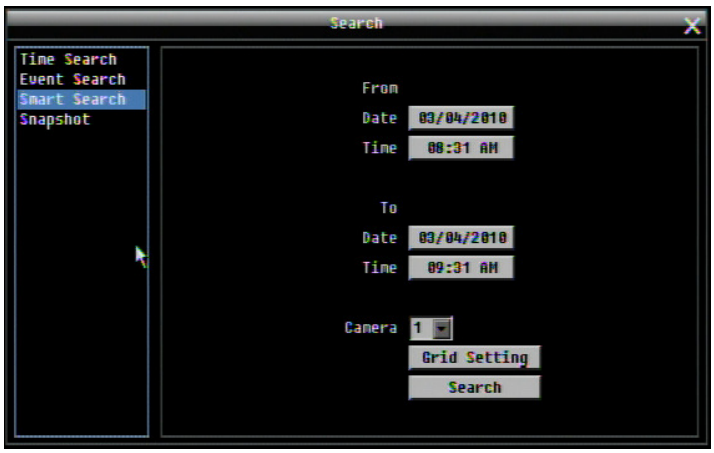
Next Page: Go to the next page

Play: Play the selected item

Copy: Copy the selected item to an attached USB storage device

4.9.3 Smart Search

Smart Search allows the user to search for Motion Detection events in specific grid areas in the feeds of specific cameras. All Motion Detection events that fit the search criteria are displayed in the form of an Event List.



From : **Date:** Select starting date. **Time:** Select starting time.

To : **Date:** Select ending date. **Time:** Select ending time.

Camera: Select which camera's feed will be searched.

Grid Setting: Press this button to open the Motion Grid Setup window.

Motion Grid Setup: Use this page to select Motion Detection areas. If you want to select only small parts of the camera view, click on the screen to reveal the grid and select the areas where you want the DVR to look for Motion during the above-configured period. (Selected Motion Detection areas are green, unselected areas are blue or clear.)

Set All: Press this button to select the entire area.

Clear All: Press this button to clear all the configured grids.

Save & Back: Press this button to save the motion grid setting and return to motion setting menu.

Cancel: Press this button to cancel all changes and return to the Smart Search submenu.

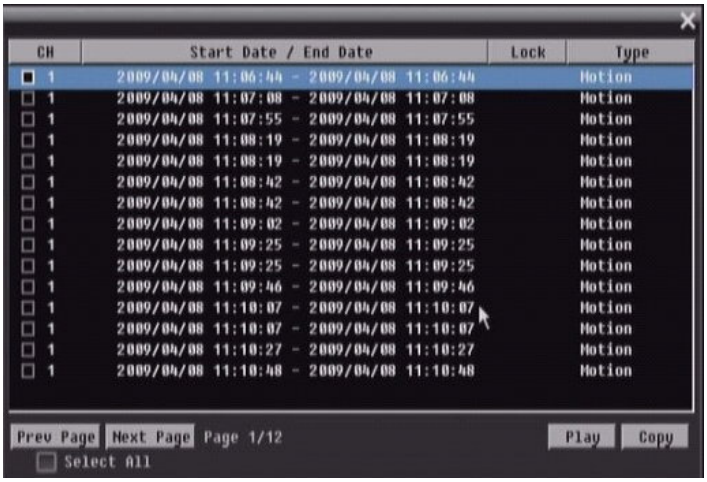
How to select a Motion Detection search area with the MOUSE:

1. Click on the editing screen to reveal the grid.
2. Decide what area you want to select and click on the grid block at the upper left corner of the area you want to select.
3. Click on the grid block at the lower right corner of the desired area.
4. The rectangular area between these two grid blocks will be selected. You can now add individual grid blocks by double-clicking on them. If you click once on a grid block it will turn red, which means if you click on another grid block far away, all grid blocks in-between them will turn green (active).
5. Choose "Save & Back" to proceed.

How to select a Motion Detection search area with the Front-Panel buttons:

1. Scroll to the Grid Setting field and press the Enter key to open the Motion Grid Setup page.
2. Scroll on to the setup screen and press Enter to reveal the grid.
3. Decide what area you want to select and scroll to the grid block at the upper left corner of the area you want to select. *Use the control wheel's outer ring to scroll horizontally, and the inner disk to scroll vertically.*
4. Press Enter to select that corner block. The block will turn red, indicating that the setup program is waiting for you to click on an opposing block so that it can turn all the grid blocks in-between into green (selected) blocks.
5. Scroll to the grid block at the lower right of the area you want to select. The rectangular area in-between will turn red. Click Enter and the red area will turn green (selected).
6. Add other blocks to this area if required, or add separate areas.
7. Press the Menu/Esc button to exit the selection area.
8. Scroll to "Save & Back" and press Enter.

Click on the "**Search**" button to start searching. The search results will be shown as a list of events (see the image on the right).



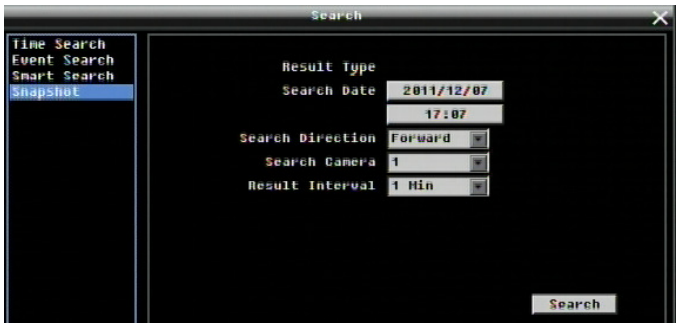
Prev Page: Go to the previous page

Next Page: Go to the next page

Play: Play the selected file

Copy: Copy the selected file

4.9.4 SNAPSHOT



The Snapshot submenu allows the user to search for a specific recorded incident by viewing a list of video snapshots. These snapshots of recorded video are taken by the DVR and listed in chronological order. The time period of the searched recording and the time interval between each consecutive snapshot depends on the settings configured on this page. The desired Camera's channel number also has to be specified.

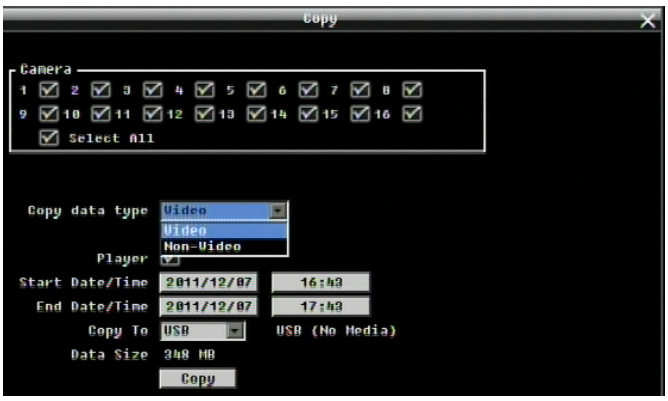
Search Date: Select the starting moment (day and time) of the to-be-searched recorded video.

Search Direction: Select Forward to start at the selected moment and search "forward" in time, or select Backward to search "backward" in time from the start moment.

Search Camera: Select the Camera Channel whose recorded feed should be searched.

Result Interval: Select the time interval between each snapshot (options range from 1 minute to 1 day).

4.10 COPY



Mouse: Right-click to bring up the menu bar and click the icon to enter the Copy Menu.

Front Panel: Press the "**Copy**" key to enter the Copy Menu directly.

Camera: Select which cameras' footage will be archived. Choose "**Select All**" to select all the cameras.

Copy Data Type: Select "Video" to copy the video footage. Select "Non-Video" to copy log data about either Alarm events, or Motion events, or both.

Player: Check the box to include the ePlayer program as part of the copy (recommended).

Start Date/Time: Select the starting date/time of the footage that you want to archive.

End Date/Time: Select the end date/time of the footage that you want to archive.

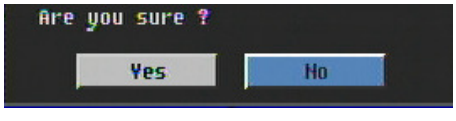
Copy To: Select whether you want to copy to a USB device or a CD/DVD (CD/DVD on "D" models only).

Data Size: This shows the estimated total size of the archive file for the entered time period.

Copy: Press this button to start archiving.

4.11 LOGOUT

Right-click to bring up the menu bar and click the button to bring up the Logout confirmation window (see the image below).



Press the "**Yes**" button if you are ready to log out of the system. You will need to log in again before accessing any other configuration options.

Chapter

5

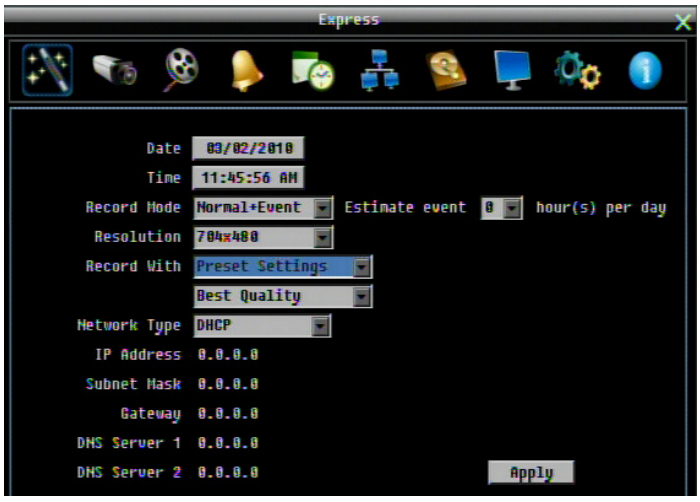
5 THE CONFIGURATION SUBMENU

This chapter will walk you through the DVR Menu Settings step by step and show you how to configure the DVR for your specific application.

1. To bring up the Main Menu, press the "**Menu**" key on the front panel, or right-click with the USB mouse to bring up the OSD Menu bar.
2. Scroll to the "Configuration" icon " " and press "**Enter**" (or left-click on the icon) to enter the Configuration Menu. Log in if necessary (see the Login section for more details).

5.1 EXPRESS

On the right is a screenshot of the **EXPRESS SETTING MENU**. This menu is used to configure global, identical express settings for all cameras simultaneously. For example, if the user selects Event Only in Record Mode and presses the "**Apply**" button, all connected cameras will be set up for Event Only recording. HOWEVER, If the user selects the blank field (------) in Record Mode and presses the "**Apply**" button, all cameras will **keep** their **own current, individual** recording settings **without any changes.**



Date: This sets the current date of the DVR.

Time: This sets the current time of the DVR.

Record Mode: Choose from these options …

----------: Each camera keeps its own, individual recording settings.

Normal+Event: All cameras will be set up for Normal recording (continuous recording until recording is switched off by the user) and Event recording.

Event Only: All cameras will only record when Event reactions are triggered.

Schedule Rec: All cameras will only record according to a configurable schedule.

For the two Event recording options, enter the estimated number of hours per day that events will be recorded.

Resolution: Select the recording resolution for all the cameras (based on the video format).

NTSC: 704x480 / 704x240 / 352x240

PAL: 704x576 / 704x288 / 352x288

Record With:

----------: All cameras will keep their individual settings.

Preset Settings: Select a preset setting for recording quality. Available options will be shown in a dropdown box below this menu item, namely Best Quality, Standard, and Extended Record. For more details, please refer to APPENDIX B: RECORDING VALUE SELECTION RULES.

Recording Days: (Not available if the "Schedule Record" box has been checked in the Record & Play > Record menu.) Use this option if you want to set the maximum number of days during which the DVR should record footage from all the cameras. The DVR will auto adjust relative settings (like recording quality, etc.) for all the cameras to fit all the footage from the selected number of recording days into the available storage space. Available options will be shown in a dropdown box below this menu item, namely 1, 3, 5, 7, 14, 20, 30, 40, 50 and 60 days. For more details, please refer to APPENDIX B: RECORDING VALUE SELECTION RULES

Network Type:

Static IP: The user enters a static IP address for network connections.

DHCP: The DHCP server in the LAN will automatically assign an IP address for network connections.

PPPoE: This is for a direct DSL connection ONLY (no router). Check with your ISP to see if it uses PPPoE. For this connection type, you will need to have an ISP-assigned username and password.

IP Address: This field shows the current IP Address for the DVR. If a Static/Fixed IP address is used, then this value must be set manually. If DHCP or PPPoE is selected, this value will be assigned automatically.

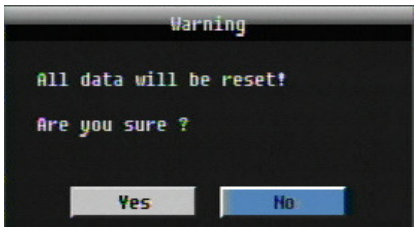
Subnet Mask: This field shows the subnet mask for your network so the DVR will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

Gateway: This field shows the gateway for your network so that the DVR will be able to communicate *outside* the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS Server 1: This field shows the primary DNS server for your network. When DHCP is selected and an internet connection is available, this value will be assigned automatically. **This field must be assigned correctly if you plan to use the DDNS feature** (see section 5.6.3 DDNS for more details).

DNS Server 2: This field shows the secondary DNS server for your network.

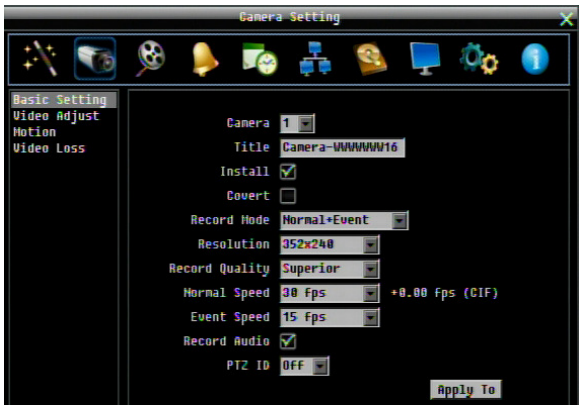
> ***Note:*** *The default addresses in the machine are for internal testing only. You must supply your own addresses to comply with your network. Refer to section 5.6.3 for more details.*



Apply: Press the "**Apply**" button to save and apply the above Express settings. The system will automatically adjust the recording frame rate according to your settings. A confirmation window will pop up. Press "Yes" to change the Resolution, Recording Frame Rate and Quality (of all the cameras) according to your Express settings.

5.2 CAMERA SETTING

On the right is a screenshot of the **CAMERA SETTING MENU**. This menu is used to configure individual camera settings.



5.2.1 Basic Setting

Camera: Select the camera to be configured.

Title: The title setting allows you to assign a title to the selected camera. Each title supports up to 16 characters. The on-screen keyboard will appear when you click the title option.

Install: Check this box to enable the selected camera. To take full advantage of the DVR's recording abilities, any unused cameras should have this option set to "disabled". If you enable this setting for a camera, the DVR will immediately start to record that camera's feed. You can end such a recording action by exiting the configuration menu, clicking on the camera channel's box, and then pressing the Stop button on the front panel.

Covert: Check this box to hide the camera picture in the Multi-channel, Full-screen and Sequence viewing modes for all users that log in with usernames that are classified as "Operators" in the User setup menu (see the System Setting > User section for more details). However, the footage will still be recorded and **can be played back by any user who has playback rights**.

Record Mode: Two recording modes are available.

Normal + Event: This recording mode includes Normal (continuous recording until recording is switched off by the user) and Event recording.

Event Only: Footage will be recorded only when specified events occur.

Resolution: Select the recording resolution based on the camera's video format.

NTSC: 704x480 / 704x240 / 352x240

PAL: 704x576 / 704x288 / 352x288

Record Quality: Select an image quality for recording. There are five different options available: Superior, High, Standard, Basic and Low. A higher image quality uses more HDD space.

Normal Speed: The maximum frame rate in frames (images) per second (FPS) for continuous recording. The speed is limited by the processing capacity of the DVR divided by the combined processing requirements of all the installed cameras, with an upper limit of 30 FPS for NTSC (25 for PAL) per individual camera (real-time recording). This DVR is capable of recording 480 CIF-sized frames (352x240) per second (NTSC; 400 for PAL). To record a resolution of one 2 CIF-sized (704x240) image (per a given moment) requires the computing resources of two CIF frames (per the same given moment) from the overall capacity of 480 CIF frames per second. To record a 704x480-sized image (called D1 or 4CIF) requires the computing resources needed to process/record four CIF frames from the overall capacity of 480 CIF frames per second. Thus, this DVR can record a combination of CIF, 2 CIF and 4 CIF images, with different combinations of image size/resolution and different FPS rates on different cameras, so long as the total number of allocated CIF equivalents is not greater than 480 CIF per second. Available options for recording speeds are 30, 15, 10, 7.5, 5, 3, 2 and 1 FPS.

Examples (for NTSC):

16 cameras at CIF resolution at 30 FPS: 16x30=480 FPS

2 cameras/4CIF/30FPS plus 5 cameras/2CIF/15FPS plus 9 cameras/CIF/10FPS:

2x4x30+5x2x15+9x1x10= 240+150+90 = 480

2 cameras/4CIF/30FPS plus 2 cameras/2CIF/30FPS plus 12 cameras/CIF/10FPS:

2x4x30+2x2x30+12x1x10= 240+120+120 = 480

In these examples, the recording capacity of the DVR is fully allocated to normal recording, with no reserve capacity for increasing image size and/or FPS rate in response to a motion or alarm event (see next item). Since EverFocus DVRs have the capability to change the size of recorded frames and the FPS rate in response to events, it may be advisable to reserve some recording capacity for when an event response is triggered.

For example: 2 cameras/4CIF/10FPS plus 5 cameras/2CIF/10FPS plus 9 cameras/CIF/5FPS:

2x4x10+5x2x10+9x1x5= 80+100+45 = 225 allocated with 255 in reserve

Recording capacity remaining for all cameras *(shown to the right of the 'Normal Speed' field)*: The number here indicates the remaining recording capacity available for all installed cameras, *calculated according to the image size (Resolution) selected for the current camera*. That is, the number shown is the number of available FPS at the selected image size (Resolution). Thus, the number shown is the number of still-available CIF-sized Frames Per Second divided by the number of CIF equivalents required to record that size image – 1 (for CIF), 2 (for 2CIF), or 4 (for 4CIF / D1). Changing the Resolution of a camera, or viewing the settings for a camera with a different resolution will cause this number to change in proportion to the selected image size for the selected camera. When this number is positive, it means there is still recording capacity available for allocation. If this number is negative, it means the recording capacity has been exceeded, and the user must lower at least one camera's Normal Speed recording rate or reduce at least one camera's Resolution (which will require the DVR to process fewer CIF-sized Frames). This number must be positive ("+") before the user can save the changes. Otherwise, a pop-up window will display "Total FPS exceed maximum recording rate, discard changes!" and the settings for all cameras will return to their previous values.

Event Speed: This is the *MAXIMUM* desired frame rate in frames per second (FPS) for event recording; if more than one camera requires simultaneous event recording, the total for all cameras cannot exceed the maximum available FPS for the DVR at the corresponding resolution setting, and *the available FPS may automatically be divided across all cameras*

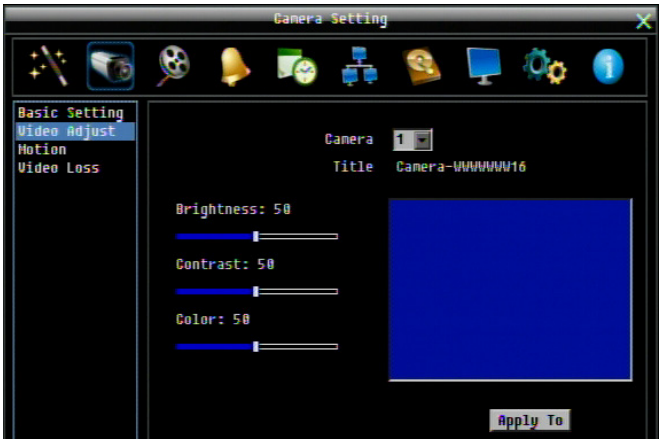
responding to an event at any given moment. In the example above, with 225 CIF FPS allocated and 255 CIF FPS remaining, it would be possible to increase the FPS rate on the two 4 CIF cameras from 10 FPS to 15 FPS and also increase the *resolution and rate* of the five 2 CIF cameras to 4 CIF and 15 FPS, with 15 CIF equivalent FPS still available to be assigned to one or more of the nine CIF resolution cameras. If not all cameras experience event reaction triggers simultaneously, greater resolution and/or FPS increases are possible for individual cameras, as long as the net total of 480 CIF equivalents is not exceeded.

Record Audio: Check this box to include the camera feed's audio data in the recording.

PTZ ID: When using a PTZ Camera, in order to control the camera's PTZ functions via the DVR, this ID must match the RS-485 ID used by the connected camera. Click "On" to enter the ID number. Click "Off" to cancel PTZ control for this camera.

Apply To: This button can be used to copy the selected camera's recording settings to other cameras. Select which camera(s) you wish to copy to. "Select All" selects all cameras, "Unselect All" deselects all cameras. Click "OK" to copy the settings or "Cancel" to exit without copying.

5.2.2 Video Adjust



Camera: Select the camera you wish to adjust. "Title" will change to the name of the selected camera.

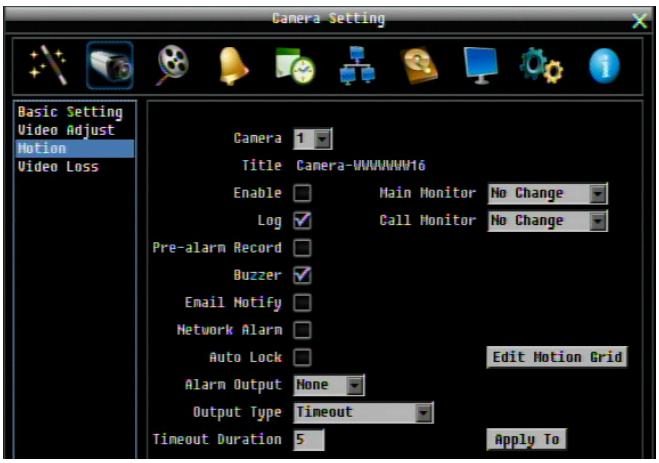
Brightness: Adjusts how bright/dark the picture appears. If details appear to be lost in the shadows or darker regions, try increasing the Brightness. If the image appears too saturated or if the colors appear overwhelmed by glare, try decreasing the Brightness.

Contrast: Adjusts the total amount of light output from the display. If details are lost or lines appear distorted, try decreasing the contrast.

Color: Adjusts the amount of color information in the picture.

Apply To: This button can be used to copy the video settings to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, "Unselect All" deselects all cameras. Click "OK" to copy the settings or "Cancel" to exit without copying.

5.2.3 Motion



Camera: Select the camera you wish to configure. The "Title" field will change to display the name of the selected camera.

Enable: Check this box to enable motion detection. Other motion options will not be available unless this box is checked.

Log: Check this box to record motion events in the log.

Main Monitor: Main monitor display options when a motion event occurs.

No change: No change on the main monitor display.

Full Screen: If this camera experiences a motion event, its

feed will be displayed in full screen on the Main monitor.

Call Monitor: Call-monitor display reaction options when a motion event occurs.

No change: No change on the call-monitor display.

Full screen: If this camera experiences a motion event, its feed will be displayed in full screen on the Call monitor.

Pre-alarm Record: Check this box to add to the motion-event recording (recorded on the hard disk) footage from 10 seconds before the motion event. (The default minimum pre/post-recording buffer is around 4 seconds before and 2 seconds after the alarm/event starts and stops. This pre-alarm recording's frame rate will follow the "**Normal**" frame rate settings.)

Buzzer: Check this box to let a motion-event trigger activate the DVR's buzzer.

Email Notify: Check this box to send email notification when a motion event is detected. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen. (See the Email section for more information.)

Network Alarm: Check this box to send out a network alarm to a client PC when a motion event occurs. (This feature requires PowerCon software to be installed on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

Auto Lock: Check this box to have all events recorded in a write-protected segment of the Hard Disk. (The DVR will lock a period of time when the alarm occurs, the length of time will depend on the DVR's configuration.)

Alarm Output: Selecting "None" will leave this function disabled. Selecting one of the four numbers will instruct the DVR to transmit a signal through the alarm output relay marked with the same number (at the back of the DVR) when a motion event occurs on this camera channel. This will only work if a device has been connected to the relevant output relay.

Output Type: If an Alarm Output has been selected above this setting, this setting will decide how that Output is transmitted when a motion event occurs.

Timeout: The alarm output lasts for a set period of time. If this option is selected, a field will appear under this field for setting the period duration. Setting options are 1~150 seconds.

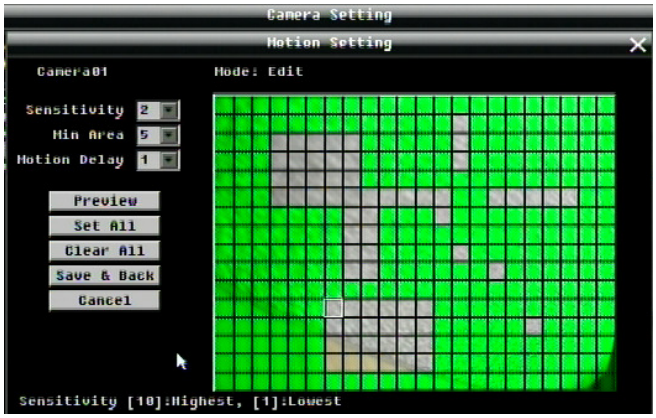
Permanent: The alarm will remain on until the user presses the "Enter" key on the front panel, or resets the alarm configuration.

Transparent: The alarm output continues as long as motion is detected.

Trans+Timeout: The alarm output continues as long as motion is detected, then it continues for the set time period.

Timeout Duration: This period can be from 1 to 150 seconds.

Edit Motion Grid: Press this button to edit the motion grid (see the image on the right). Click on the video area to see the grid. Motion Detection areas are colored green.



Sensitivity: Set the threshold value for sensitivity within the grids. Select from 1 (lowest) to 10 (highest).

Min Area: To avoid motion events being triggered by small objects, this number defines how many grid blocks have to detect (exceed the sensitivity threshold) movement before a motion event is triggered. Select a value between 1 (default) and 5 grid blocks.

Motion Delay: Set

Preview: Preview the motion grid.

Set All: Press this button to select the entire area.

Clear All: Press this button to clear all the selected grid blocks.

Save & Back: Press this button to save the motion grid setting and return to the Motion setting menu.

Cancel: Press this button to cancel all changes and return to the Motion setting menu.

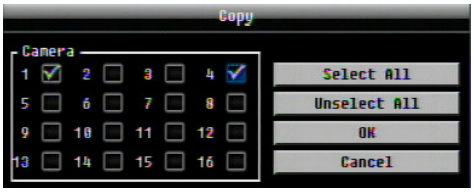
How to select a Motion Detection area with the MOUSE:

1. Click on the editing screen to reveal the grid.
2. Click “Clear All” to delete all green areas (motion detection areas).
3. Decide what area you want to select and click on the grid block at the upper left corner of the area you want to select.
4. Click on the grid block at the lower right corner of the desired area.
5. The rectangular area between these two grid blocks will be selected. You can now add individual grid blocks by double-clicking on them. If you click once on a grid block it will turn red, which means if you click on another grid block far away, all grid blocks in-between them will turn green (active).
5. Choose “Save & Back” to proceed.

How to select a Motion Detection area with the Front-Panel buttons:

1. Scroll to the Grid Setting field and press the Enter key to open the Motion Grid Setup page.
2. Scroll on to the setup video screen and press Enter to reveal the grid.
3. Decide what area you want to select and scroll to the grid block at the upper left corner of the area you want to select. Use the control wheel’s outer ring to scroll horizontally, and the inner disk to scroll vertically.
4. Press Enter to select that corner block. The block will turn red, indicating that the setup program is waiting for you to click on an opposing block so that it can turn all the grid blocks in-between into green (selected) blocks.
5. Scroll to the grid block at the lower right of the area you want to select. The rectangular area in-between will turn red. Click Enter and the red area will turn green (selected).
6. Add other blocks to this area if required, or add separate areas.
7. Press the Menu/Esc button to exit the selection area.
8. Scroll to “Save & Back” and press Enter.

Apply To: This button can be used to copy the motion settings for the selected camera to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.



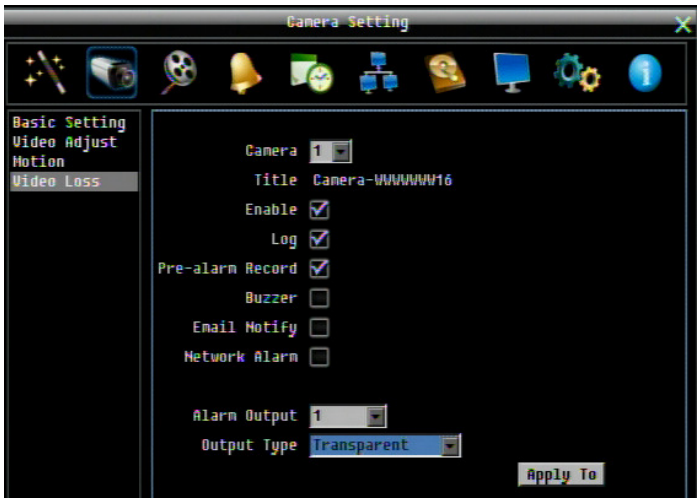
5.2.4 Video Loss

This section lets you configure the selected camera channel to detect and react to video-loss events.

Camera: Select the camera you wish to configure, “Title” will change to the title name of the selected camera.

Enable: Check this box to enable video-loss detection.

Log: Check this box to record video-loss events in the log.



Pre-alarm Record: Check this box to add to the motion-event recording (recorded on the hard disk) footage from 5 seconds before the video-loss event. (This Pre-alarm recording's frame rate will follow the "**Normal**" frame rate settings.)

Buzzer: Check this box to activate the DVR's buzzer when a video-loss event occurs.

Email Notify: Check this box to enable email notification when a video loss event occurs. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen. (See the Email section for more information.)

Network Alarm: Check this box to send out a network alarm to a client PC when video loss occurs. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

Alarm Output: Selecting "None" will leave this function disabled. Selecting one of the four numbers will instruct the DVR to transmit a signal through the alarm output relay marked with the same number (at the back of the DVR) when a video-loss event occurs on this camera channel. This will only work if a device has been connected to the relevant alarm output relay.

Output Type: If an Alarm Output has been selected above this setting, this setting will decide how that Output is transmitted when a motion event occurs.

Timeout: The alarm output lasts for a set period of time. If this option is selected, a field will appear under this field for setting the period duration. Setting options are 1~150 seconds.

Permanent: The alarm will remain on until the user presses the "Enter" key on the front panel, or resets the alarm configuration.

Transparent: The alarm output continues as long as video loss is detected.

Trans+Timeout: The alarm output continues as long as video loss is detected, then it continues for the set time period.

Timeout Duration: This period can be from 1 to 150 seconds.

Apply To: This button can be used to copy the video loss settings to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, "Unselect All" deselects all cameras. Click "OK" to copy the settings or "Cancel" to exit without copying.

5.3 RECORD & PLAY

On the right is a screenshot of the **RECORD & PLAY SETTING MENU**. This menu is used to configure basic recording and playback settings.

5.3.1 Record

Record Overwrite: Check this box and the disk will begin overwriting when full. NOTE: Unless this box is checked, THE DVR WILL STOP RECORDING WHEN THE DISK IS FULL.

The use of record overwrite is strongly recommended. If you do not use this feature, please be sure to make specific arrangements to monitor/be notified when the disk is full.

Schedule Record: If this box is checked, the recording schedule set up in the Schedule Setting > Schedule menu page will be active, and *all other recording settings will be subject to this setting* (i.e. the preset Schedule will OVERRIDE all other recording settings). FOR INSTANCE: if a camera channel has been set up to do Event Only recording for say, Motion Detection, in the **Camera Setting** menu, but the setting for that channel on the **Schedule** menu page is to do Normal recording on a Monday, then that camera channel's recording will be overridden to Normal (continuous recording) on a Monday. If the preset Schedule setting for that channel is No Record for Tuesdays, the channel will not be recorded on a Tuesday, even if a Motion Detection event occurs on a Tuesday. If the Schedule Record box is **unchecked**, all recording settings will return to those set up in the Camera Setting page.

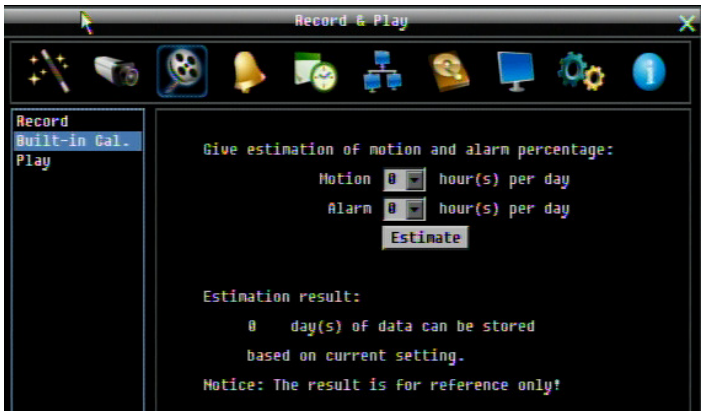
Thus, the preset Schedule "record mode" settings will OVERRIDE the Camera Setting "record mode" settings while the Schedule Record box is checked. The only way to stop the DVR from recording during a preconfigured schedule period, is to turn Schedule Record off (uncheck the box).

Time Stamp: Select whether the time stamp (the time and date of the recording as displayed on the recorded footage) should be displayed on the Bottom or Top of the screen. Select Off to disable the time stamp.

Record Status Relay Output: Selecting "**NONE**" would disable this function. Select either **1**, **2, 3,** or **4**, depending on the alarm relay port you want to assign to this function. The device connected to this relay port will be able to indicate when the DVR is recording, and when it is not recording.

Auto Erase Video: The hard drive will automatically erase video after it has been on the hard drive for the selected number of days. If you want to fill up the hard drive space, choose "OFF". (See Record Overwrite and notes above.) This feature is useful if local rules and regulations require recorded video to be discarded after a specific number of days, or if you want to limit the retention of older recorded video to clear space in anticipation of event recording.

5.3.2 Built-in Cal.



The built-in recording period calculator can give a rough estimation of the number of days' worth of recordings that can be stored on the hard drive/s, according to the current settings. In order to compute as accurate an estimate as possible, please enter your estimations for the hours per day you expect recording to take place due to your configured event and alarm triggers.

Motion: Enter the expected number of hours of recording per day that will be triggered by motion-detection events.

Alarm: Enter the expected number of hours of recording per day that will be triggered by alarm triggers.

If the total of Motion and Alarm hours is more than 24 hours, the calculator will assume that motion and alarm recording take place the whole day, and therefore the whole time.

Click on the "ESTIMATE" button to display the results at the bottom of the screen:

" xx days of data can be stored based on current setting"

5.3.3 Play

Quick Playback: Check this box to enable the Quick Playback function as described below.

Playback From x Seconds ago: If this setting is "x" seconds, and if the user presses the Play front-panel button (or clicks on the Playback icon), the DVR will begin playing back footage from exactly "x" seconds ago. Choose from 60 to 3600 seconds.

5.4 ALARM & EVENT

On the right is a screenshot of the **ALARM & EVENT SETTING MENU**. This menu will guide you through alarm and event setup.

5.4.1 Alarm

Alarm: Select the number of the alarm input via which the alarm device is connected to the DVR (1~16). This number should ideally correspond with the number of the device's "Active Camera", as described below.

Enable: Check this box to enable a response to alarm triggers experienced by the alarm device selected above.

Log: Check this box to record alarm events from the selected alarm device in the log.

Pre-alarm Record: Check this box to copy recorded footage to the hard disk from 5 seconds before the alarm event triggered by this alarm device. This pre-alarm footage will be recorded from the feeds of all related cameras, as configured in the Record field below. (This pre-alarm recording rate will follow the "**Normal**" frame rate setting)

Buzzer: Check this box to let alarm events from this alarm device activate the DVR's buzzer when the alarm event occurs.

Main Monitor: Use this to configure what happens on the main monitor display when this alarm device experiences an alarm.

No change: No change on the main monitor display.

Full Screen: If this alarm device experiences an alarm event, the feed of the Active Camera (configurable below) will be displayed in full screen on the main monitor.

Call Monitor: Use this to configure what happens on this monitor display when this alarm device experiences an alarm.

No change: No change on the call-monitor display.

Full screen: If this alarm device experiences an alarm event, the feed of the Active Camera (configurable below) will be displayed in full screen on the call monitor.

Record: Click this to select which camera(s) will start recording in response to an alarm triggered by this alarm device. Clicking this button will open a selection menu.

Input Type: Use this field to select the type of alarm trigger for this alarm device.

N.O.: Normal Open contact.

N.C.: Normal Closed contact.

Active Camera: This field is for associating this alarm device with a specific camera. For example, if you had an external motion detector near camera four, you would select “4” here. This alarm will be associated with this camera for optional full-screen display, event logging, and PTZ preset activation.

PTZ (Preset/Tour/Pattern/AutoPan): Clicking this field will display a drop-down menu with the options Off, Preset, Tour, Pattern, and AutoPan. Selecting any option except Off and Autopan will open another field where you can enter any number between 0 and 255. If the Active Camera is a PTZ speed dome, and if it has been configured with any of these preset positions/movement sequences, the user can select the type of preset and the number of the preset. If these settings are configured correctly in this field, the DVR will instruct the Active Camera to move to the specified preset position/sequence IF/WHEN this alarm device experiences an alarm event. The DVR will also record the resulting video feed.

Email Notify: Check this box to enable email notifications when an alarm event occurs. Email operation requires that valid email settings have been entered in the Network Setting > Email setup screen. (See the Email section for more information.)

Network Alarm: Check this box to send out a network alarm to a client PC when this alarm device experiences an alarm event. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

Auto Lock: Check this box to let the DVR record the footage of this alarm device’s alarm events in the write-protected segment of the Hard Disk. (The DVR will lock a period of time around the moment an alarm event occurs, the length of time will depend on the DVR settings.)

Alarm Output: Selecting “None” deactivates this option. Selecting one of the numbers will let the DVR transmit an output signal through any wire connected to the similarly numbered alarm output on the back panel – IF/WHEN this alarm device experiences an alarm event. This means that the alarm event triggered by this alarm device can trigger a reaction in another device, if such a device is connected to the DVR via the relevant alarm output socket.

Output Type: Use this field to select the type of output action when an alarm event is relayed to another device.

Timeout: The alarm output lasts for as many seconds as is configured in the Timeout Duration field below.

Permanent: The alarm output will remain active until the user presses the **“Enter”** key or resets the alarm remotely.

Transparent: The alarm output remains as long as the alarm input is active.

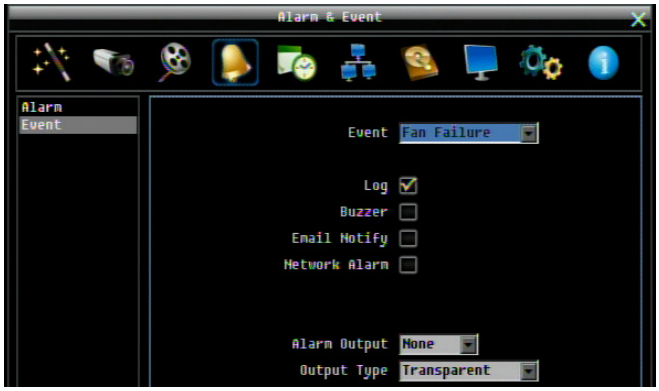
Trans+Timeout: The alarm output continues until the event ends, then continues for as many seconds as is configured in the Timeout Duration field below.

Timeout Duration: Period selectable from 1 to 150 seconds.

Apply To: This button can be used to copy this alarm device’s settings to other alarm devices. Select which cameras you wish to copy to. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

5.4.2 Event

This section covers Event notifications caused by internal system event warnings. For events like Motion Detection and Video Loss, see the Camera Setting submenu. Click on the dropdown box to select the event you want to configure.



Event: The DVR will sense when one of the following events occur. You can configure each event to cause a range of

reactions. These are the event types:

Fan Failure: If configured to do so, the DVR will create this event if the fan stops working, or if the fan is not working on start-up.

HD Temperature: If configured to do so, the DVR will create this event if the hard drive is starting to overheat.

HD Failure: If configured to do so, the DVR will create this event if it fails to detect the HDD on startup.

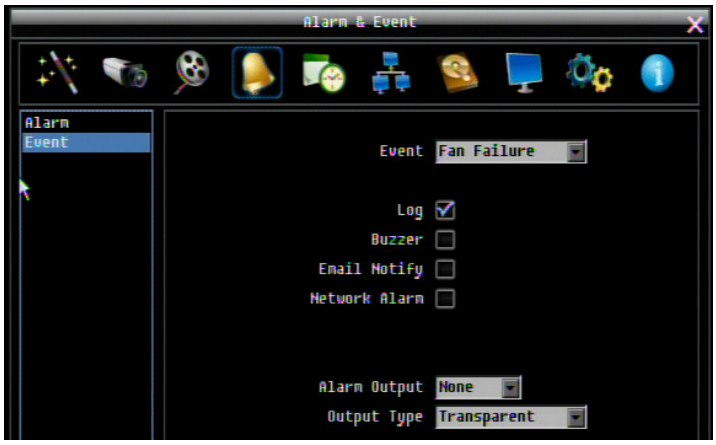
HD Full: If configured to do so, the DVR will create this event if the DVR runs out of memory space (i.e., if it has not been set to Overwrite in the Record menu)

HD Off: If configured to do so, the DVR will create this event if any of its HDDs are switched off or removed.

Power Loss: If configured to do so, the DVR will create this event if power is restored after a power failure / power disconnection.

Network Loss: If configured to do so, the DVR will create this event if connection to the local network is lost. **NOTE:** This function only checks the physical connection (link) to the network. Any network behavior that blocks data connectivity (blocked ports, IP addressing errors, etc.) is not detected by this function.

Fan Failure:



Log: Check this box to record fan failure events in the log.

Buzzer: Check this box to activate the DVR's buzzer when the fan stops working.

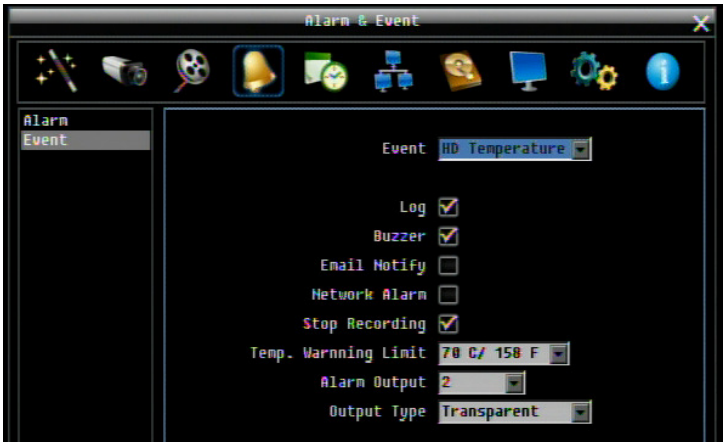
Email Notify: Check this box to enable email notification when the fan is not working. This requires that valid email settings have been entered in the Network Setting/Email setup screen.

Network Alarm: Check this box to send out a network alarm to a client PC when this event occurs. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

Alarm Output: Click on one of the numbers in the dropdown box to let the DVR transmit a signal through the alarm output with the same number, if this event occurs. Selecting "None" would disable this reaction.

Output Type: If an Alarm Output reaction is configured the type of alarm output will be **Transparent** and cannot be changed. This means that the alarm output signal would continue as long as the alarm condition is active.

HD Temperature:



Log: Check this box to record HDD overheating events (when the drive's temperature goes over the below-configured Temp. Warning Limit) in the log.

Buzzer: Check this box to activate the DVR's buzzer when the hard drive's temperature goes over the Temp. Warning Limit (the limit is configured on this menu).

Email Notify: Check this box to enable email notification when the selected event occurs. This requires that valid email settings have been entered in the Network Setting > Email setup screen.

Network Alarm: Check this box to send out a network alarm to a client PC when this event occurs. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

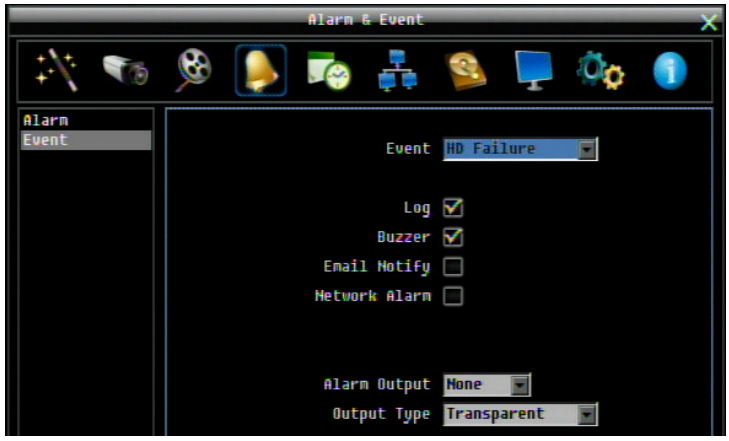
Stop Recording: Check this box to let the DVR stop recording when its HD's temperature goes over the selected limit.

Temp. Warning Limit: This sets the trigger temperature for HD Temperature events. Selectable limits range from 50°C to 70°C.

Alarm Output: Click on one of the numbers in the dropdown box to let the DVR transmit a signal through the alarm output with the same number, if this event occurs. Selecting "None" would disable this reaction.

Output Type: If an Alarm Output reaction is configured the type of alarm output will be **Transparent** and cannot be changed. This means that the alarm output signal would continue as long as the alarm condition is active.

HD Failure:



Log: Check this box to record HD Failure events in the log.

Buzzer: Check this box to activate the DVR's buzzer if no hard drive is detected on system startup.

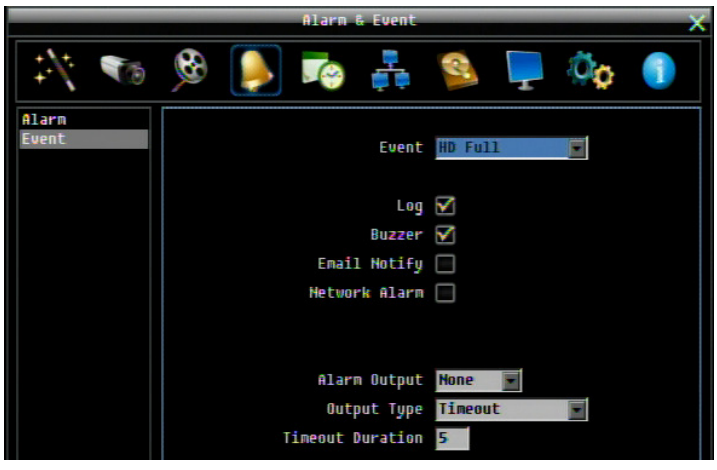
Email Notify: Check this box to enable email notification when the selected event occurs. This requires that valid email settings have been entered in the Network Setting > Email setup screen.

Network Alarm: Check this box to send out a network alarm to a client PC when this event occurs. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

Alarm Output: Click on one of the numbers in the dropdown box to let the DVR transmit a signal through the alarm output with the same number, if this event occurs. Selecting "None" would disable this reaction.

Output Type: If an Alarm Output reaction is configured, the type of alarm output will be **Transparent** and cannot be changed. This means that the alarm output signal would continue as long as the alarm condition is active.

HD Full:



Log: Check this box to record HD Full events in the log.

Buzzer: Check box to activate the buzzer when the hard drive is full (recommended if the Record Overwrite function is disabled in the Record & Play > Record menu).

Email Notify: Check this box to enable email notification when the selected event occurs. This requires that valid email settings have been entered in the Network Setting > Email setup screen.

Network Alarm: Check this box to send out a network alarm to a client PC when this event occurs. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu;

see the Alarm Server section for more information.)

Alarm Output: Click on one of the numbers in the dropdown box to let the DVR transmit a signal through the alarm output with the same number, if this event occurs. Selecting "None" would disable this reaction.

Output Type: If an Alarm Output has been selected above this setting, this setting will decide how that Output is transmitted when this event occurs.

Timeout: The alarm output will last for a set period of time. If this option is selected, a field will appear under this field for setting the period duration. Setting options are 1~150 seconds.

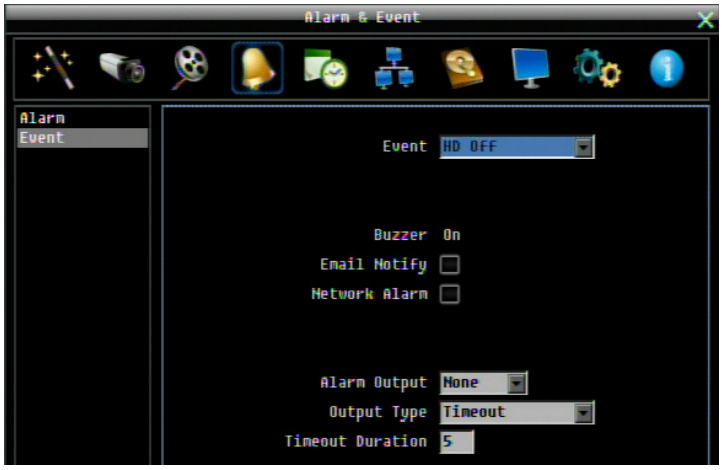
Permanent: The alarm will remain on until the user presses the "Enter" key on the front panel, or resets the alarm configuration.

Transparent: The alarm output will continue for as long as the event trigger is detected.

Trans+Timeout: The alarm output will continue as long as the event trigger is detected, then it will continue for the set time period.

Timeout Duration: This period refers to the Timeout output type above and can be from 1 to 150 seconds.

HD Off:



Buzzer: By default, the DVR's buzzer will automatically start buzzing if the hard drive is turned off, or disconnected, or becomes disabled (cannot be detected by the system).

Email Notify: Check this box to enable email notification when this event occurs. This requires that valid email settings have been entered in the Network Setting > Email setup screen.

Network Alarm: Check this box to send out a network alarm to a client PC when this event occurs. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

Alarm Output: Click on one of the numbers in the dropdown box to let the DVR transmit a signal through the alarm output with the same number, if this event occurs. Selecting "None" would disable this reaction.

Output Type: If an Alarm Output has been selected above this setting, this setting will decide how that Output is transmitted when this event occurs.

Timeout: The alarm output will last for a set period of time. If this option is selected, a field will appear under this field for setting the period duration. Setting options are 1~150 seconds.

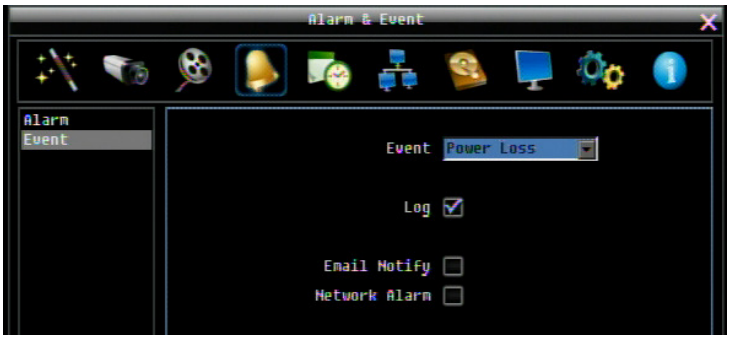
Permanent: The alarm will remain on until the user presses the "Enter" key on the front panel, or resets the alarm configuration.

Transparent: The alarm output will continue for as long as the event trigger is detected.

Trans+Timeout: The alarm output will continue as long as the event trigger is detected, then it will continue for the set time period.

Timeout Duration: This period refers to the Timeout output type above and can be from 1 to 150 seconds.

Power Loss:



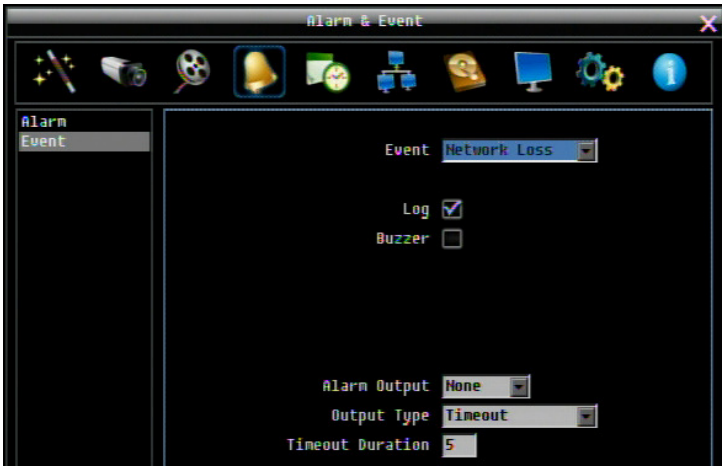
Log: This box should be permanently checked to log all Power Loss incidents.

Email Notify: Check this box to enable email notification of this event when power has been restored. This requires that valid email settings have been entered in the Network Setting > Email setup screen.

Network Alarm: Check this box to send out a network alarm to a client PC when power has been restored. (This feature requires PowerCon software on the client PC and proper settings for the Alarm Server in the Network Setup menu; see the Alarm Server section for more information.)

NOTE: As alarms and emails cannot be transmitted without power, the log entry is made when power is restored, and the same applies to all event notifications.

Network Loss:



Log: Check this box to record Network Loss events in the log.

Buzzer: Check this box to activate the buzzer when the network connection is lost.

Alarm Output: Click on one of the numbers in the dropdown box to let the DVR transmit a signal through the alarm output with the same number, if this event occurs. Selecting "None" would disable this reaction.

Output Type: If an Alarm Output has been selected above this setting, this setting will decide how that Output is transmitted when this event occurs.

Timeout: The alarm output will last for a set period of time. If this option is selected, a field will appear under this field for setting the period duration. Setting options are 1~150 seconds.

Permanent: The alarm will remain on until the user presses the "Enter" key on the front panel, or resets the alarm configuration.

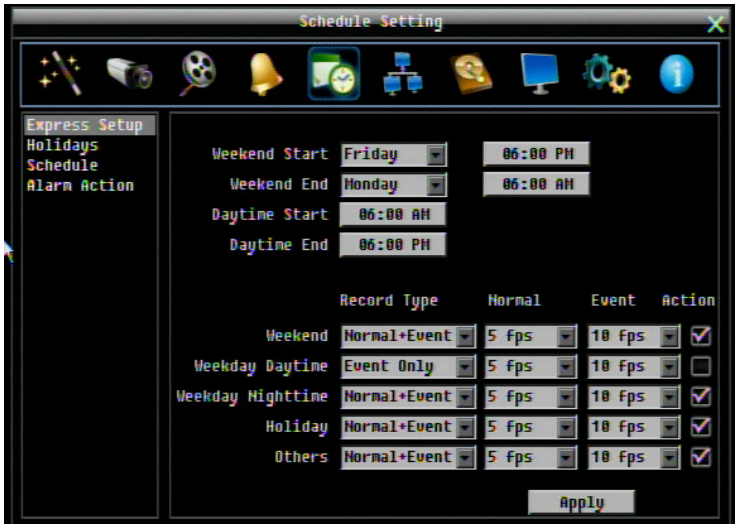
Transparent: The alarm output will continue for as long as the event trigger is detected.

Trans+Timeout: The alarm output will continue as long as the event trigger is detected, then it will continue for the set time period.

Timeout Duration: This period refers to the Timeout output type above and can be from 1 to 150 seconds.

NOTE: *This function only checks the physical connection (link) to the network. Any network behavior that blocks data connectivity (blocked ports, IP addressing errors, etc.) is not detected by this function.*

5.5 SCHEDULE SETTING



On the right is a screenshot of the **SCHEDULE SETTING MENU**. In this menu you can set periods during which the DVR will record the feeds of selected cameras. **These schedules will ONLY be active if the Schedule Record box has been checked in the Record & Play > Record submenu.**

5.5.1 Express Setup

Weekend Start: Select the start moment of the period that the DVR should classify as "weekend".

Weekend End: Select the end moment of the period that the DVR should classify as "Weekend".

Daytime Start: Select the start moment of the period that the DVR should classify as "Weekday Daytime". (This moment will automatically become Weekday Nighttime's end moment.)

Daytime End: Select the end moment of the period that the DVR should classify as "Weekday Daytime". (This time will automatically become Weekday Nighttime's start moment.)

Record Type: Select the type of recording schedule for each of the time periods listed in the left-hand column. Specific periods like ***Holiday and "Others" periods can be set up in the Holidays submenu***.

Disabled: The DVR will not record during this period.

Event Only: The DVR will only record if a preconfigured event occurs.

Normal+Event: The DVR will record continuously and will color-code periods on the Playback Bar where event triggers would otherwise have been the only reason why that footage was recorded.

Normal (Frame Rate): Select the FPS for Normal (continuous) recording during the scheduled period. This would be the maximum frame rate if the DVR is not forced to automatically reduce the rate because of high FPS and resolution requirements for a large number of channels. Selecting 0fps here would effectively shut down the Normal recording segment of the schedule.

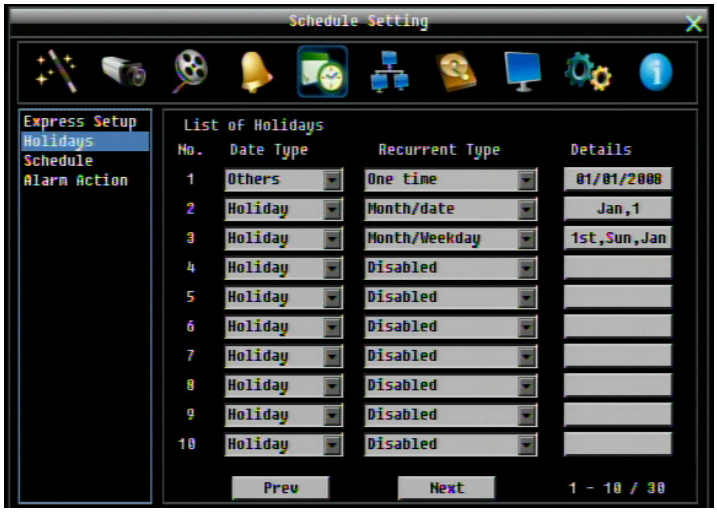
Event (Frame Rate): Select the FPS for Event recordings during the scheduled period. This would be the maximum frame rate if the DVR is not forced to automatically reduce the rate because of high FPS and resolution requirements for a large number of channels. Event recording should usually have much higher FPS settings than Normal recording, to conserve HDD space. Selecting 0fps here would effectively shut down the Event recording segment of the schedule.

Action: Check this box to enable Buzzer, Alarm out, E-mail and Network actions selected elsewhere when a preselected Event occurs during the selected schedule period.

Apply: Press the "Apply" button to bring up a confirmation window. Select "Yes" to confirm and apply the express schedule settings or "No" to cancel changes.

5.5.2 Holidays (and 'Others')

In addition to setting a weekly recording schedule, the user can also create a specific recording schedule for specific days of the year. **These days can be added to the schedules on the Schedule menu page (underneath this page).**



Date Type: Select either "Holiday" or "Others". (These are two different groups, you can assign special days in each group.)

Recurrent Type: Choose how often each scheduled day should be applied.

Disabled: Ignore this entry (on hold for later activation).

One time: This schedule is used only once, on the specified date.

Month/date: This schedule is used on the same day, every year (e.g. January 1 for New Year's Day)

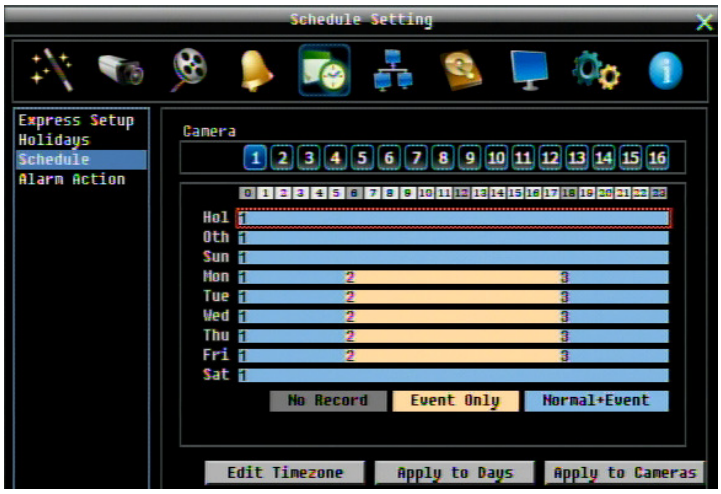
Month/weekday: This schedule is used on a first/second/third/last Monday/Tuesday/…/Sunday in a specified month (e.g. the 4th Thursday in November for Thanksgiving).

Details: Select the date to be used.

Prev: Previous Page (up to 30 Holiday entries configurable) **Next:** Next Page (up to 30 Holiday entries configurable)

5.5.3 Schedule

This page lets you set up schedules that will control per-camera recording modes according to the time of day for each weekday and for all Holidays (combined) and for all Other days (combined). **These schedules will ONLY be active if the Schedule Record box has been checked in the Record & Play > Record submenu.**



Camera: Select a camera number to change the schedule for that camera channel. The DVR can be set up to record the feed of each camera channel according to the time schedule set on this page. Different schedules can be created for each weekday and for all configured Holidays (combined) and for all configured Other days (combined).

Timelines: The timelines use three different colors to distinguish each recording mode.

Gray (NoR = No Record): No recording functions will be active during these time blocks. (In these periods, Events won't trigger Event recordings, even if the Event-experiencing channel has been set up to record during specific Events.)

Beige (E): Only preconfigured Events will be recorded during these time blocks.

Blue (N+E): (Default) Normal (continuous) and Event recording will both be active during these time blocks. (Event recordings will be color-coded on the Playback Bar to differentiate them from Normal recordings, and such Event recordings will have higher FPS settings.)

To set a camera channel's recording schedule using a Mouse:

The fastest and best way to describe how to set these schedules, is by explaining this example:

Example: If you want to create a recording schedule for Camera Channel 1 for Wednesdays to be 00:00-06:30=NoR, then 06:30-18:00=N+E, then 18:00-20:00=E, then 20:00-06:00(the following day)=NR, ***DO THE FOLLOWING:***

1. The default color of each day's timeline is blue (N+E). Go to Wednesday's timeline and *turn the period from 00:00-06:00 to gray (NoR)* by clicking on the "0" (for 00:00) area of the timeline (on the far left). (There are 24 numbered blocks above the timelines, representing the 24 hours of the day).

   A) Click on the timeline once to activate it. A **red frame** will appear around the timeline to show that it is active. A **blue rectangle** will also appear where you clicked. This will become the selected start time of the NoR period (when you click on it again). This **blue rectangle represents 30 minutes**, so you can select your start/end times in increments of 30 minutes.

   B) Move your blue rectangle to the correct part of the timeline by clicking on the correct point on the timeline (the far left is 00:00) to place the rectangle there. Now, click on the blue rectangle and the whole **area to the right** will turn gray (NoR). (FYI, if you click the rectangle again, the area to the right will turn beige (E) and if you click it again the area will turn back to blue. The **color switch sequence is gray>beige>blue.**)

   C) **NOTE:** Once you click on the rectangle to set the recording type for a certain period, the **information line below the timelines** will **show the start time and end time** of that period. If the period is set for NoR recording, the info line will say "No Record". If the period is set for E or N+E recording, the info line will show the preset FPS setting for N recordings, and the FPS setting for E recordings, and the info line will then end with "Action:Y".

   D) **To turn the 06:30-18:00 period back to blue** (N+E), click on the point on the timeline that falls under the second half of the block numbered "6" in the top bar (the hours bar). Click on the blue rectangle again to turn the area to the right to beige (E), and click on it again to turn it to blue (N+E). Every time you click on the blue rectangle, the start and end time of that period will appear in the information line below the timelines. Use this information line to confirm the start and end times of your configured periods. (Click the blue rectangle slightly to the left or right if the start time is not correct.)

   E) You should now have a gray area on the left of your timeline and a blue area on the right. **To add the beige (E) area to the right of the blue area,** click on the 18:00 point until the area to the right turns beige. Use the info line at the bottom to confirm that the start time is correct.

   F) Next, repeat the procedure to turn the 20:00-24:00 period to gray (NoR).

   G) Next, go to the next timeline, Thursday, and repeat all the procedures above according to your requirements. **Alternatively, simply copy Wednesday's schedule to Thursday (or any other day)**, and then apply any adjustments for Thursday, if required (see point H below).

   H) **To apply the selected day's recording schedule to other days,** or to **all** days, simply click on the **"Apply to Days"** button below the timeline area and select the days to copy the selected day's schedule to.

   I) **To apply the selected camera's COMPLETE recording schedule to other cameras,** or to **all** cameras, simply click on the **"Apply to Cameras"** button below the timeline area and select the days to copy the selected day's schedule to.

   J) **To set the recording resolution and N-recording FPS and E-recording FPS for a selected day's different periods,** click on the day's timeline to highlight it, then click the **"Edit Timezone"** button at the bottom left part of the timeline area. All E and A+E periods will be configurable, but NoR periods will not be configurable. (See the related section below for details.)

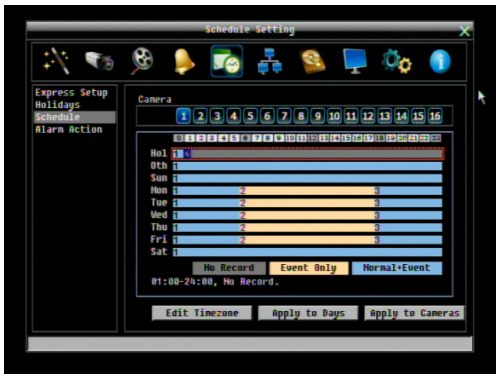
   K) **To activate the schedule** you have set, go to the Record & Play menu's Play submenu page and check the Schedule Record box. Your recording schedule will now override all other recording settings, including those in the Camera Settings submenu. The only way to stop recording while in Schedule Record mode, is to uncheck the Schedule Record box.

To set a camera channel's recording schedule using the Front Panel:

In Brief: Use the example above (mouse configuration) to understand the logic of setting the recording modes per camera and per period for the Recording Schedule. Then, apply the logic of the Front-Panel navigation rules (p14-15) to scroll between submenus and setting values. Click Menu/Esc to exit from a setting field to a previous setting field. Click Enter to confirm selections and enter into setting fields. Use the inner disk and outer rim of the scrolling wheel to scroll between options and highlight options.

In Detail: Follow the following steps:

1. **Enter schedule setting mode**: Select the "Schedule' icon on the configuration menu and press the 'Enter' button; the left hand column will be highlighted in a blue frame. Use the scrolling wheel to highlight the 'Schedule' option and press the "Enter" button to enter the schedule configuration page. At this point, the whole editing area at the lower right side will be highlighted by a blue frame.
2. **Enter camera selection mode**: Use the scrolling wheel to switch to Camera selection mode. When Camera selection mode is selected, the list of camera numbers will be highlighted in a blue frame. See the image on the right.
3. **Selecting camera**: Use the scrolling wheel to select desired camera to configure. Selected camera number will be highlighted by a blue frame. See the image above.
4. **Enter time bar editing mode**: Use the scrolling wheel to switch to **timeline editing mode**. When this mode is selected, all 9 time bars will be highlighted within a blue frame.
5. **Select desired timeline for setting**: press the "Enter" button; the first timeline will be selected for setting and highlighted in a red frame. See the image on the right. Use the scrolling wheel to select the desired timeline for setting.
6. **Editing blocks in a time bar**: when a time bar is selected (highlighted in red frame), press the "Enter" button, and the first block of this bar will be selected (highlighted in blue frame). Use the scrolling wheel to select the desired block as the starting time, and press Enter button to confirm. At this time, the current and all following blocks will turn into gray, which means this gray period has been set to the recording mode of gray (No Rec). The user can also change the period to a different record mode (with a different color) by following the instructions in the next step.



7. **Changing recording mode (color) of a period**: Use Right/Left arrow key to switch to the first block (with number on it) of a period. Clicking Enter button, and this period will switch to another color, which means switching to another record mode. The color switch sequence is gray>beige>blue.
8. To exit the screen, press the "Menu/Esc" button as required to move up the menu levels and, if desired, out of the menu system.

Schedule Setting
Editing: Holidays
From To Record Resolution Normal Event Action
1. 00:00 01:00 Normal+Event 704x480 5 fps 10 fps
2. 01:00 24:00 Event Only 352x240 1 fps 30 fps
Apply
Close
Edit Timezone
Apply to Days
Apply to Cameras

Click the "**Edit Timezone**" button to edit the recording parameters for a specific period (see the image on the right).

From: Displays the preset period's start time

To: Displays the preset period's end time

Record: Displays the preset record mode for the preset period

Resolution: Select the recording resolution.

NTSC options: 704x480 / 704x240 / 352x240

PAL options: 704x576 / 704x288 / 352x288

Normal: Frame rate in images per second for continuous recording. It is important to keep track of the normal recording resources being allocated at each hours of the day. Increasing the Normal recording resolution and/or rate can inadvertently request more recording resources than the DVR is capable of delivering, or allocate so much of the DVRs resources that there is no excess available for increased FPS rate and/or resolution in response to an Event.

The speed is limited by the maximum total recording capacity of the DVR as allocated across all the installed cameras, with an upper limit of 30 FPS (NTSC – 25 PAL) per individual camera (real time recording). The DVR is capable of recording 480 CIF (352x240) sized frames per second (NTSC; 400 PAL); each 704x240 image (2 CIF) per second requires allocation of two of those CIF frames from the overall capacity of 480 CIF frames, and each 704x480 image (D1 or 4 CIF) per second requires allocation of four of the CIF frames from the overall capacity. Thus the DVR can record a combination of CIF, 2 CIF and 4 CIF images, with different combinations of image size/resolution and different FPS rates on different cameras, so long as the total CIF equivalents allocated is not greater than 480 CIF per second. Choices for possible record speeds are 30, 15, 10, 7.5, 5, 3, 2 and 1 FPS.

Examples:

16 cameras at CIF resolution at 30 FPS: 16x30=480 FPS

2 cameras/4CIF/30FPS plus 5 cameras/2CIF/15FPS plus 9 cameras/CIF/10FPS:

2x4x30+5x2x15+9x1x10= 240+150+90 = 480

2 cameras/4CIF/30FPS plus 2 cameras/2CIF/30FPS plus 12 cameras/CIF/10FPS:

2x4x30+2x2x30+12x1x10= 240+120+120 = 480

In these examples, the recording capacity of the DVR is fully allocated to normal recording, with no reserve capacity for increasing image size and/or FPS rate in response to a motion or alarm event (see next item). Since EverFocus DVRs have the capability to change recorded image size and FPS rate in response to events, it may be advisable to reserve some recording capacity for event response. For example:

2 cameras/4CIF/10FPS plus 5 cameras/2CIF/10FPS plus 9 cameras/CIF/5FPS:

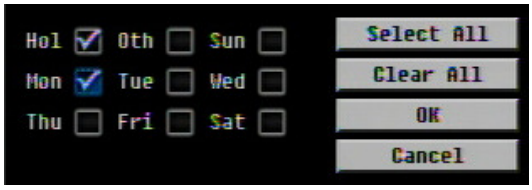
2x4x10+5x2x10+9x1x5= 80+100+45 = 225 allocated with 255 in reserve.

Event: This is the ***maximum*** desired frame rate in frames per second (FPS) for event recording; if more than one camera requires simultaneous event recording, the total for all cameras cannot exceed the maximum available FPS for the DVR at the corresponding resolution setting, and *the available FPS may be divided across the cameras responding to an event.* In the example above, with 225 CIF FPS allocated and 255 CIF FPS remaining, it would be possible to increase the FPS rate on the two 4 CIF cameras from 10 FPS to 15 FPS and also increase the *resolution and rate* of the five 2 CIF cameras to 4 CIF and 15 FPS, with 15 CIF equivalent FPS still available to be assigned to one or more of the nine CIF resolution cameras. If not all event conditions occur simultaneously, greater resolution and/or FPS increases are possible for individual cameras, as long as the net total of 480 CIF equivalents is not exceeded.

Action: Check this box **to enable notifications enabled elsewhere (Buzzer, Alarm out, E-mail, and Network Alarm)** when an event occurs.

The **Apply to Days** button:

This button can be used to copy schedules to other days. Select which days you wish to copy to. "Select All" selects all days, “Clear All” deselects all days. Click “OK” to copy the settings or "Cancel" to exit without copying.

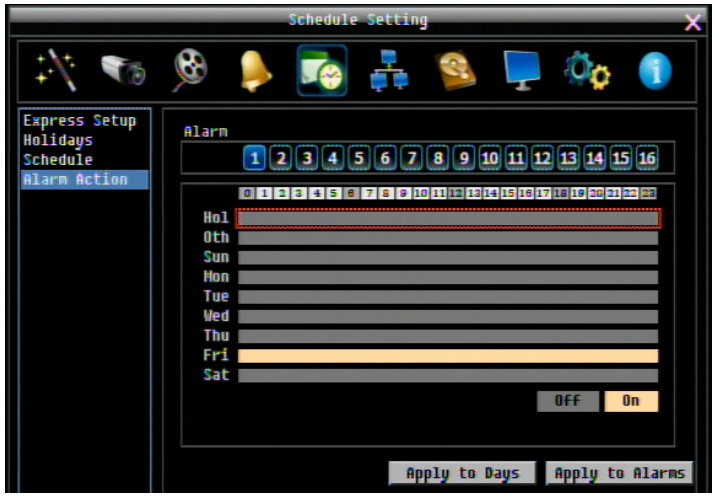


The **Apply to Cameras** button:

This button can be used to copy schedules to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Clear All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

5.5.4 Alarm Action

This setup menu page defines the **recording responses** per camera **to any “alarm” input trigger signals** – according to time periods on specific days of the week and/or holidays and/or ‘other’ days. **The user can use this page to select when an alarm input trigger will trigger recording, and when it won’t.**



Alarm: Select the number of the camera channel that the to-be-configured alarm is associated with. This alarm would usually be associated with the camera that is closest to it, and would usually have the same number as that camera’s channel. **Remember that all recordings for this alarm will be recorded with the camera that has the same number.** Each alarm can be set on a 24-hour time block for Holiday (Hol), Other (Oth), Sunday (Sun), Monday (Mon), Tuesday (Tue), Wednesday (Wed), Thursday (Thu), Friday (Fri), or Saturday (Sat).

Timelines: The timelines use two different colors to distinguish each recording mode.

Off (Gray): No recording during this time period.

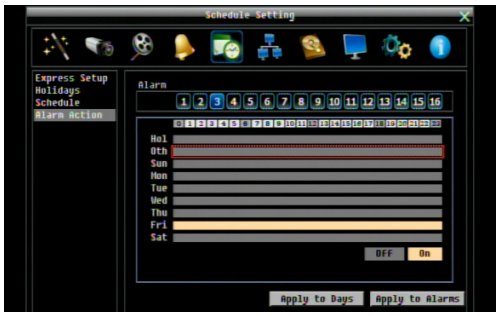
On (Beige): Alarm trigger events will be recorded during this time period.

To set the Alarm Action schedule with the Mouse:

1. Click on the “Alarm Action” option in the left column, then click on the right hand side of the screen. The border for that region will now turn blue.
2. Click on the number of the alarm input (“Alarm” – usually associated with the camera channel of the same number) you wish to configure. That number will be framed in blue.
3. Click on a desired start time block on a time bar. There are 24 blocks on the time bar representing 24 hours respectively. At this time, the selected time bar will be highlighted by a red frame and the selected block will be

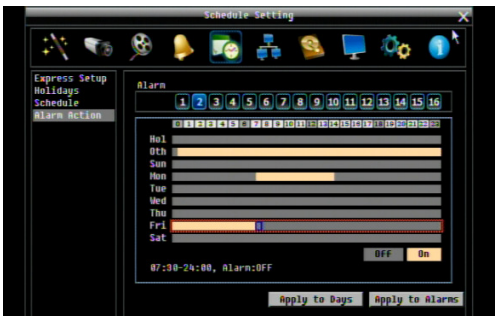
highlighted in blue frame. Initially, the selected block and all following blocks will be gray, which means this gray period has been set to the recording mode corresponding to gray (alarm action recording OFF).

4. Change the section to different mode (with a different color) by clicking on the first block of the section. The color switches from gray > beige > gray, every time user clicks the first block of a section. Beige indicates 'alarm action recording ON'.
3. To set the end of a period, select the time block following the end of the period defined in the step above. The first click will highlight the block in blue. A second click will toggle the state/color of that block and the remainder of the time bar, ending the above defined period

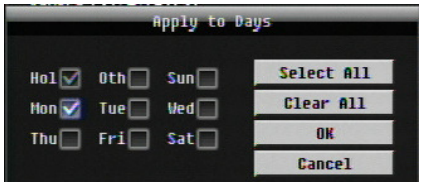


Setting the Alarm Action schedule with the Front Panel:

1. **Enter the Alarm Action setting mode**: highlight the "Alarm Action: menu choice and press the "Enter" button to enter Alarm Action setting mode. At this time, the whole editing area at the right side will be highlighted within a blue frame. See the image on the right.
2. **Enter alarm selection mode:** Use the scrolling wheel to switch to the Alarm selection mode.
3. **Selecting alarm:** Use the scrolling wheel to select an alarm to configure. Selected alarm number will be highlighted by a blue frame.
4. **Enter time bar editing mode:** Use the scrolling wheel to switch to time bar editing mode. When this mode is selected, the area surrounding the time bars will be highlighted within a blue frame.
5. **Select desired time bar for setting**: Press the Enter button, the first time bar will be selected and highlighted in a red frame. See the image on the right. Use the scrolling wheel to choose the desired time bar for setting.



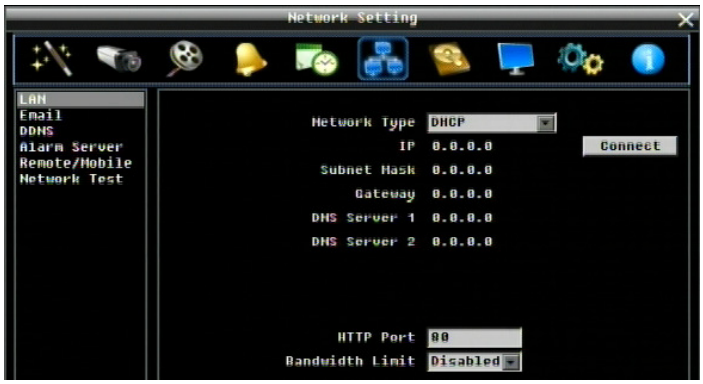
6. **Editing blocks in a time bar:** When a time bar is chosen (highlighted in red frame), the press Enter button to select that time bar for configuration; then the first block of this bar will be selected (highlighted in blue frame). Use the scrolling wheel to move to the desired block for the starting time, and press the Enter button again to confirm. At this time, the current and all following blocks will turn into gray, which means this gray period has been set to the recording mode of gray (Alarm Action off). User can also change the period to a different record mode by following instructions in the next step.
7. **Changing recording mode (color) of a period:** Use the scrolling wheel to select the first block of a period. Press the Enter button, and this period will switch to another color, which means switching to another recording mode. The color switch sequence is gray->beige->gray.



Apply to Days: This button can be used to copy schedules to other days. Select which days you wish to copy to. "Select All" selects all days, "Clear All" deselects all days. Click "OK" to copy the settings or "Cancel" to exit without copying.

Apply to Cameras: This button can be used to copy schedules to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, "Clear All" deselects all cameras. Click "OK" to copy the settings or "Cancel" to exit without copying.

5.6 NETWORK SETTING



This menu is for configuring the DVR for a network connection.

NOTE: *Since every Network Configuration is different, please check with your Network Administrator or ISP to see if your DVR should use specific IP addresses and/or port numbers.*

5.6.1 LAN

Network Type:

Static IP: The user can use this option to set a fixed IP for network connection.

DHCP: The LAN's DHCP server will automatically assign an IP address for the network connection.

PPPoE: This option is only for a direct connection to a DSL service. Verify with your Internet Service Provider whether it uses PPPoE.

IP: This field shows the DVR's current IP Address. A static IP address must be set manually. If DHCP or PPPoE is selected, this value will be assigned automatically.

Subnet Mask: This field shows the subnet mask for your network so that the DVR will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

Gateway: This field shows the gateway on your network for the DVR to use when communicating with any devices not on the local network. If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS Server 1: This field shows the primary DNS server for your network. If DHCP is selected and an internet connection is available, this value should be assigned automatically. This field must have a valid DNS address in order to use the DDNS feature (see the text below and in section 5.6.3 below and section 7. DDNS for more detail).

DNS Server 2: This field shows the secondary DNS server for your network.

HTTP Port: Port number for HTTP/WEB communication.

Additional information:

1. Set up the DVR Network Menu according to the instructions detailed in the Networking chapter of this DVR's manual.

   a. If you use DHCP, all settings will be detected automatically. While DHCP is a useful tool for determining the network settings, if you set up your DVR in this manner *its IP address may change at different times for different reasons*, particularly after a power failure. *If the IP address of the DVR changes, you may have difficulties accessing your DVR* locally and/or remotely. **It is strongly recommended that you assign a fixed (static) IP address to your DVR**, and that in order to avoid address conflicts the IP address assigned be outside of the DHCP range of addresses your router issues to DHCP clients. Please do not set the DHCP address issued to the DVR by the router as its static IP address unless you take specific steps that program your router to prevent such address conflicts.
   b. If you use a fixed/static IP (**recommended**), you will need to input the information manually. In order for DDNS to work, you must enter valid data, compatible with your network, for all four of the network setting fields: IP address, subnet mask, default gateway and the DNS Address (depending on your network hardware and configuration this may be the IP address of your router/gateway, or it may be the actual IP address of the local DNS server).

The DNS server IP is required because your DNS server provides critical information necessary for the DVR to communicate with the DDNS server.

You can obtain the actual DNS IP from your Internet Service Provider (ISP); or, from a PC located on the same LAN as the DVR, go to http://www.dnsserverlist.org/ to obtain a list of the IP addresses of their recommendation of the best servers to use for your location.

2. If you are connecting through a router, make sure that you have 'opened up' all the required network ports in the *port forwarding* section of your router's setup options. That is, you have directed the router to send any incoming traffic using those IP ports to the LAN IP address of the DVR. Useful information about router port forwarding can be found at www.portforward.com. Different routers may use different terms for port forwarding function. For instance, D-Link calls it *virtual server*, Netopia calls it *pinholes*.

The default port for the PARAGON264x1 is: 80

Note: Port 80 is the default port used for web browsing. Because of this, in order to prevent the average user from hosting a web server, ***most ISPs BLOCK traffic using port 80*** from reaching the average site. If you only plan to view your DVR on a LAN, you can use port 80, and don't have to concern yourself with DDNS or routers. However, if you desire remote access to your DVR, perhaps using DDNS (optional), you MUST select functional ports and set up the port forwarding in your router. Other ports, such as 8080 and 8000 are sometimes blocked by ISPs as well.
What port(s) should be used? There are 65,535 valid IP ports to choose from. These are broken down into three groups:

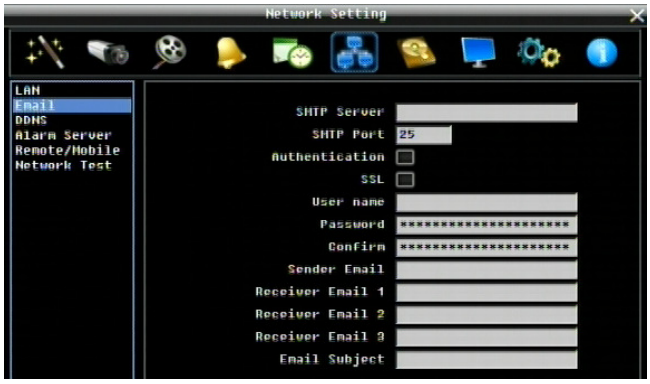
- Well Known Ports 0 thru 1023
- Registered Ports 1024 thru 49151
- Dynamic and/or Private Ports 49152 thru 65535

So, rather than encounter a port conflict by choosing a port commonly used for another purpose (like port 25 for SMTP mail or port 448 for secure sockets), choose an 'unusual' port number. For example, add 50,000 to your house number: 50,123 is less likely to lead to a port conflict. For a list of the known and registered ports, see http://www.iana.org/assignments/port-numbers

Bandwidth Limit: Specify, disabled / 128 K/ 256 K / 512 K / 768K/ 1M / 3M bps. This is the maximum bandwidth that the DVR is allowed to use on the network. This is a useful function when connecting the DVR to busy or heavily loaded networks, or when accessing the DVR(s) over a WAN.

Enable Mobile Viewing: Check this box to allow unrestricted external connection of mobile phones, and other rtsp capable devices for viewing via 3GPP/rtsp streaming.

5.6.2 EMAIL



SMTP Server: Assign the SMTP (e-mail) server's name.

NOTE: For more reliable email service, use the server's IP address.

SMTP Port: Assign the port number used by the SMTP server.

Authentication: Check this box if the SMTP server requires authentication (username / password).

SSL: Check this box if the mail server's communication needs to

be encrypted by SSL.

User name: Input the login user name if the SMTP server requires authentication.

Password: Input the password if the SMTP server requires authentication.

Confirm: Re-enter the password.

Sender Email: Input the e-mail address of the sender (the DVR). The sender's e-mail address has to match the username and password above.

Receiver Email 1: Input the first e-mail address that event messages are sent to.

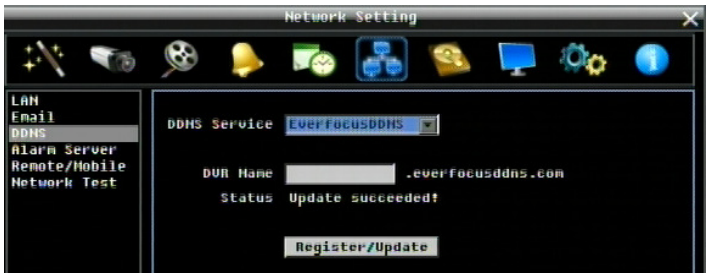
Receiver Email 2: Input the second e-mail address that event messages are sent to.

Receiver Email 3: Input the third e-mail address that event messages are sent to.

Email Subject: Input the subject-line text that will appear in the subject lines of the event messages.

5.6.3 DDNS

DDNS Server: Select either "EverfocusDDNS" or "www.dyndns.org" as the DDNS provider. If DDNS will not be used, simply select "Disable".



EverfocusDDNS:

DVR Name: Input the desired name for the DVR

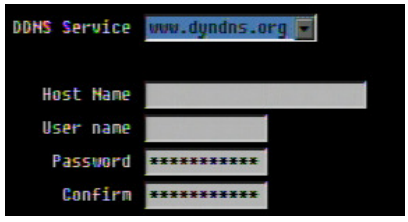
Register/Update: Click this button to submit and register the name on the EverFocus server.

The DDNS name you choose must be unique; that is, it must not already be in use. Please go to the website http://everfocusddns.com and check that the name you wish to use is available.

PLEASE NOTE: The name of the DVR **cannot include a space, or a dot** (period) or **any special characters,** particularly **~ ! @ # $ % ^ & * ( ) + < > " ; : . , _**

In the DVR's Network Setting > DDNS submenu, choose "everfocusddns.com" for the Server and put in your chosen name (verified available and without special characters) for DVR Name/hostname.
Press the Select or Submit/Update button to synchronize the DVR with the DDNS server. You should see an indication of "Success" on the screen. If you see "Could Not Find Server" or any other error message instead, double-check your network settings and DDNS name and resubmit the DDNS name until you get "Success". You should now be able to connect by typing in the host name you created.
Example: http://hostname.everfocusddns.com

It is not necessary to append the HTTP port number to the DDNS name. The EverFocus DDNS server not only keeps track of your DVR's IP address, it keeps track of the ports too!



www.dyndns.org

Host name: Host name created through the dyndns account.

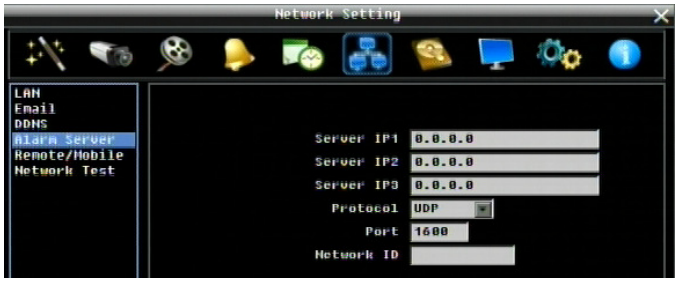
User name: User name of the dyndns account.

Password: Password of the dyndns account.

Confirm: Re-enter password.

Note: For more details on DDNS setup, please see “Chapter 8 - Everfocus DDNS Setup”.

5.6.4 Alarm Server



This menu defines the parameters for communicating with a PC that runs PowerCon software.

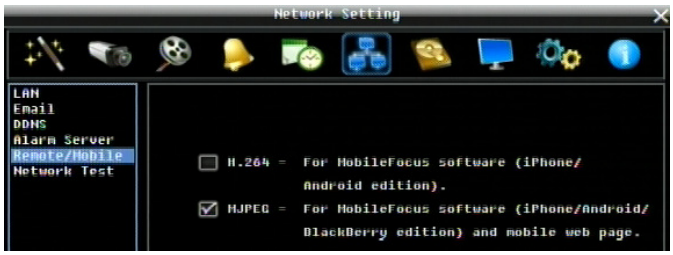
Server IP1~3: IP address of client PC with installed PowerCon Software. The network alarm can be transmitted to up to 3 addresses.

Protocol: Select the protocol type for alarm transmission:
UDP: User Datagram Protocol
TCP: Transmission Control Protocolbabapapa

Port: Select the transmission port for network alarm messages

Network ID: The network ID is an identifier for the alarm transmitter (DVR sending the alarm).

5.6.5 Remote/Mobile



This page lets you specify the type of codec that will be used to stream the mobile stream (second stream or sub stream) of the camera feeds to remote mobile clients like smart phones.

- **MJPEG** should be enabled if the remote client connects to the DVR via a **web browser** other than Internet Explorer.
- **H.264** offers better compression and higher refresh rates, but **should only be enabled if the remote client connects to the DVR via the MobileFocus app** that can be downloaded from the iTunes and Android Market websites. The Blackberry version can be found at http://www.everfocus.com/blackberry/MobileFocus.jad.

A detailed guide on downloading and using MobileFocus can be found at http://www.everfocus.com/mobilefocus.cfm.

For more information, see Section 7.3. Remote Live View Via Smart Phone on page 81.

5.6.6 Network Test

Use the www.everfocus.com.tw server as the address of your target server, or test server, or enter another server address if required. Click the Ping button to test the network connection. A message line under the Ping button will let you know if the connection test was successful or not.

5.7 DISK (INFORMATION)

On the right is a screenshot of the **DISK INFORMATION MENU**. This menu is used to review the DVR's hard drive settings and status. No values in this screen can be changed by the operator.

5.7.1 Disk

Record Time (Start): Shows the moment when the first footage that is currently recorded on the DVR, was recorded. The age of this footage will depend on the value entered in the "Auto Erase Video = x Days Ago" field in the Record & Play > Record submenu.

Record Time (End): Shows the moment when the latest footage that is currently recorded on the DVR, was recorded.

Disk: Select the disk that you want to check.

Health Status: Displays the current status of the selected disk. (Not Install, or OK, etc.)

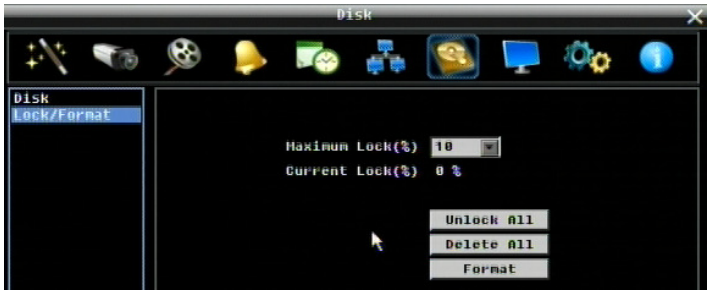
Disk Temperature: Displays the current disk temperature of the selected disk.

Disk Size/Total: Shows the total disk size of the selected disk.

Disk Size/Usage: Shows the percentage of used disk space for the selected disk.

5.7.2 Lock / Format

On the right is a screenshot of the **DISK > LOCK/FORMAT MENU**. This menu is used to control the portion of the DVR's hard drive reserved for locked event recordings, and to format a drive/s if necessary.



Maximum Lock (%): Sets the maximum lock percentage of the HDD volume. After setting the lock percentage, conditions where video is written to the locked area can be enabled/disabled in three places

i. "Camera > Motion > Auto Lock"

ii. "Alarm & Event > Alarm > Auto Lock".

iii. Lock or unlock the file manually in search result list

Current Lock (%): Displays the current lock percentage of HDD volume. If amount of locked data has reached the maximum lock percentage, the DVR will be unable to lock new data.

Unlock All: Click this button to unlock the locked part of HDD.

Delete All: Click this button to delete all the unlocked data in the HDD. **WARNING**: This will effectively ERASE the HDD's contents, except for the locked portion.

Format: Click this button to format the whole HDD. **WARNING**: This will effectively **ERASE the ENTIRE HDD!!**

5.8 DISPLAY SETTING

Below is a screenshot of the **DISPLAY SETTING MENU**. This menu gives you the Main Monitor On-Screen Display (OSD) and Main Monitor Sequence setup options.

5.8.1 Monitor OSD

Main Monitor

These are the display options for the Main Monitor.

Camera Title: Check this box to display camera titles.

Date/Time: Check this box to display current date/time.

Event Status: Check this box to display event status.

HDD Status: Check this box to display hard drive status.

Playback Date/Time: Check this box to display playback date/time.

Playback Status: Check this box to display playback status.

Monitor Output Select: This system supports either a VGA or BNC main monitor display, but not both at the same time. Select the type of monitor you have connected to your main monitor output port, or select AUTO to let the DVR automatically detect the monitor type. If you have a monitor connected to each of the two main monitor displays (BNC and VGA), you can press the Monitor button on the Front Panel to assign the feed to the other monitor (one at a time).

VGA Resolution: Select the required resolution.

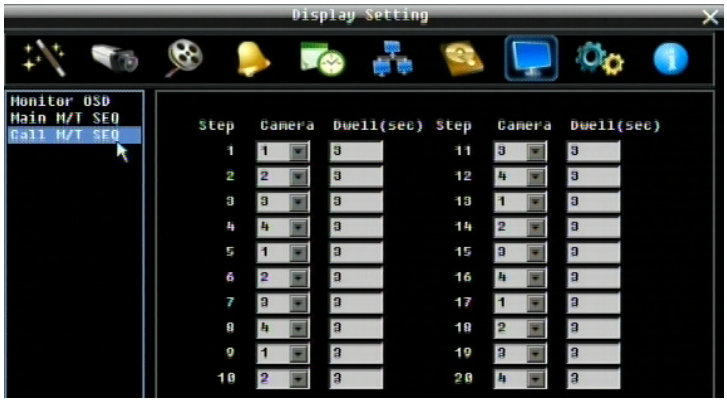
Call Monitor

These are the display options for the Call Monitor.

Camera Title: Check this box to display camera titles.

Date/Time: Check this box to display the current date/time.

5.8.2 Main M/T Seq.


Display Setting
Monitor OSD
Main M/T SEQ
Call M/T SEQ
Step Camera Dwell(sec) Step Camera Dwell(sec)
1 1 3 11 3 3
2 2 3 12 4 3
3 3 3 13 1 3
4 4 3 14 2 3
5 1 3 15 3 3
6 2 3 16 4 3
7 3 3 17 1 3
8 4 3 18 2 3
9 1 3 19 3 3
10 2 3 20 4 3

Use this menu page to configure the dwell times (the number of seconds a specific channel will be displayed) and the order in which the camera channels will be displayed on the Main Monitor.

The configured sequence will repeat continuously from steps 1 through 20 until interrupted.

Step: This number shows the position of the related camera in the sequence – for reference.

Camera: Select which camera will appear in this position/step.

Dwell (sec): Set the dwell time for each step/camera (from 0 to 99 seconds).

The configured sequence will repeat continuously from steps 1 through 20 until interrupted.

5.8.3 Call M/T Seq.

Use this menu page to configure the dwell times (the number of seconds a specific channel will be displayed) and the order in which the camera channels will be displayed on the Call Monitor.

The configured sequence will repeat continuously from steps 1 through 20 until interrupted.

Step: This number shows the position of the related camera in the sequence – for reference.

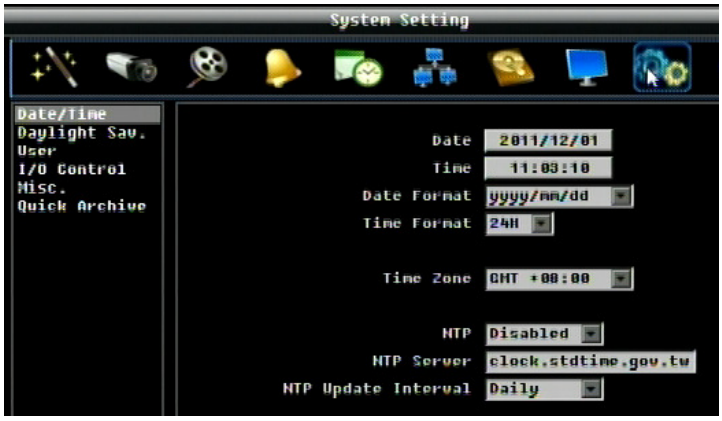
Camera: Select which camera will appear in this position/step.

Dwell (sec): Set the dwell time for each step/camera (from 0 to 99 seconds).

The configured sequence will repeat continuously from steps 1 through 20 until interrupted.

5.9 SYSTEM SETTING

On the right is a screenshot of the **SYSTEM SETTING MENU**. This menu is for setting up the general system parameters for the DVR.



5.9.1 Date/Time

Date: Set current Date.

Time: Set current Time.

Date Format: Choose date format from yyyy/mm/dd, dd/mm/yyyy, and mm/dd/yyyy.

Time Format: Change time format between 12H and 24H mode.

Time Zone: Set the time zone that the DVR adjusts to when updating from the time server.

NTP: Select “Enable” or “Disable” NTP time synchronization.

NTP Server: Displays the time server address that the DVR uses for time synchronization. Requires operating network configuration and WAN or LAN access to a compatible NTP server.

To find a compatible NTP address, please follow these steps:

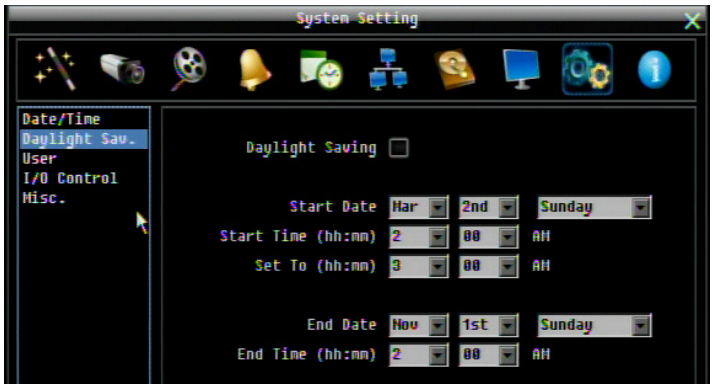
a) Go to a PC that is connected to the internet.

b) Click on “START” -> “RUN” -> type “command” and press “OK”.

c) In the DOS Prompt, type “ping pool.ntp.org” to find out the IP address of an NTP Server.

NTP Update Interval: The frequency that the system automatically updates the time via the NTP server. Select Daily, Weekly, or Monthly.

5.9.2 Daylight Saving



Daylight Saving: Check the box to enable automatic daylight saving time adjustment.

Start Date: Set the start date for daylight saving time.

Start Time (hh:mm): Set the time when daylight saving time begins.

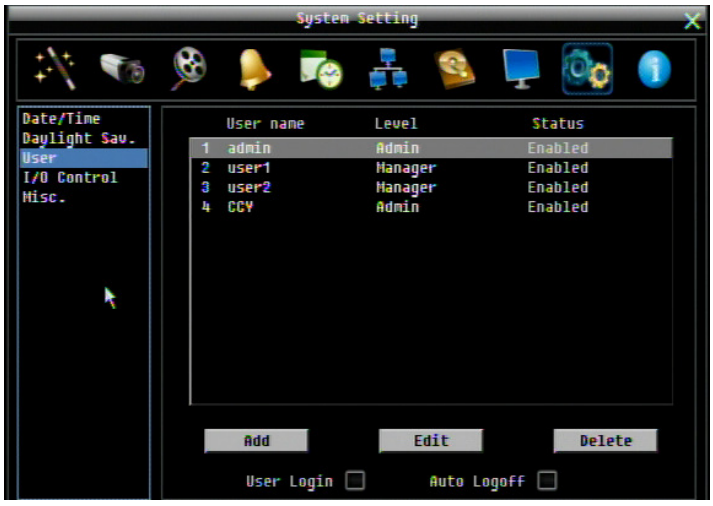
Set To (hh:mm): This is what the time will change to when daylight saving begins. For most regions, this will be one hour ahead of the "Start Time".

End Date: Set the end date for daylight saving time.

End Time (hh:mm): Set the time when daylight saving time ends.

The time change difference on the End Date will be the same as the difference between the Start Time and End Time entered for the Start Date (typically 1 hour as in the example shown).

5.9.3 User



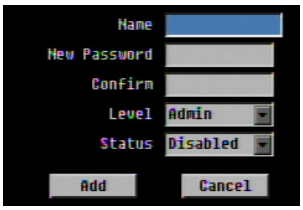
Here you can add or delete different login IDs on the system as well as set access levels. See the charts below for a listing of the rights associated with each access level.

Add: Click "Add" button to add a new user. Set the name (case-sensitive), password, access level and status. Press "Add" button to confirm a new user or "Cancel" to exit without making changes.

Edit: Click "Edit" button to make changes to an existing user account. Press "Save" button to save changes or "Cancel" to exit without making changes.

User Login: Check this box to require user login for menu access from the front panel. When this is disabled, no username or password is required to access the system from the front panel/mouse, and all users will be able to operate with ADMIN rights from the front panel/mouse.

Auto Logoff: Check this box to automatically log off the current front panel user after 3 minutes of inactivity.



There are three system access levels. The charts below show the rights of each level.

Main Menu of the DVR

User Level and Rights			
RIGHT	**ADMINISTRATOR**	**MANAGER**	**OPERATOR**
Playback	OK	OK	NO
PTZ	OK	OK	NO
Layout	OK	OK	OK
Channel	OK	OK	OK
Display	OK	OK	OK

Sequence	OK	OK	OK
Monitor	OK	OK	OK
Zoom	OK	OK	NO
Search	OK	OK	NO
Copy	OK	OK	NO
Config.	OK	OK	OK
View Covert Cameras	OK	OK	NO
Logout	OK	OK	OK

Configuration Menu of the DVR

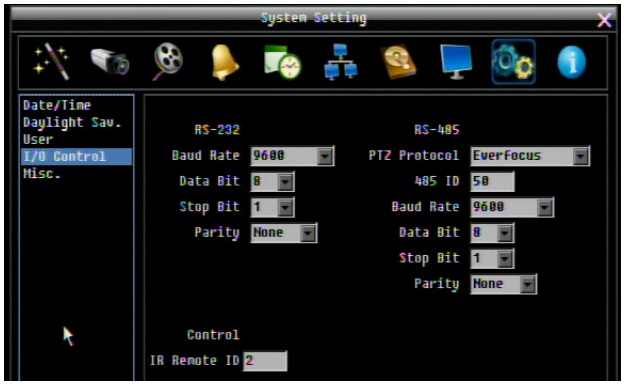
User Level and Right			
RIGHT	**ADMINISTRATOR**	**MANAGER**	**OPERATOR**
Express	OK	NO	NO
Camera	OK	NO	NO
Record/Play	OK	NO	NO
Alarm/Event	OK	NO	NO
Schedule	OK	NO	NO
Network	OK	NO	NO
Disk	OK	NO	NO
Display	OK	OK	NO
System	OK	*	**
Info	OK	OK	OK
Log	OK	NO	NO

*Managers can only access the USER submenu of the System Setting menu. They can only change their own passwords and that of "operator" IDs.

**Can only access the USER submenu; can only change own passwords.

5.9.4 I/O Control

On the right is a screenshot of the I/O Control Setting Menu. This menu is used to define the settings for controlling the DVR through RS485, and for DVR control of attached PTZ cameras.



RS232

Baud Rate: This field is to set the speed at which is used to transmit instruction or information through the RS232 port on the DVR. There are eight different speeds: 1200 BPS, 2400 BPS, 4800 BPS, 9600 BPS, 19200 BPS, 38400 BPS, 57600 BPS and 115200 BPS.

Data Bit: This field is the data bit at which you will be transferring. There are two settings for this option: 8 or 7.

Stop Bit: This field is to set the stop bit for the RS232 connection. There are two different stop bits, 1 or 2.

Parity: This field is to select the parity level at which you will be connected. You can choose between None, Odd, or Even parity levels.

RS485

PTZ Protocol: Select PTZ protocol, choose from the following protocols: Transparent, Pelco D, Pelco P, Everfocus, or Samsung. (*NOTE: all cameras on the bus must use the same protocol*)

485 ID: This is the ID used by the EKB500 to send commands to the DVR. On an RS485 connection, every device (PTZ, DVR and controller) must be assigned a unique ID number between 0 and 127.

Baud Rate: The speed used to transmit instructions or information through the RS485 port on the DVR. Choose from the following speeds: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 BPS.

Data Bit: The number of data bits used in a data packet or word. This can be set to 8 or 7.

Stop Bit: This field is to set the number of stop bits indicating the end of a data packet. This can be set to 1 or 2.

Parity: This selects the transmission error checking rule. Choose either None, Odd, or Even.

Control

One remote control can be used to operate several DVRs. The DVR to be addressed is selected by pressing the key corresponding to its ID number on the remote control.

IR Remote ID: ID used by the remote control to select this DVR. This can be set from 1 to 4.

5.9.5 Misc.

Firmware

Current Firmware Version: Displays the current version.

Firmware Upgrade: Press "Upgrade" to upgrade the firmware.

> ***NOTE:*** *To perform a Firmware Upgrade, you will need to connect a USB flash device that has the desired firmware.* ***Do not disconnect the USB device or turn off the power to the unit during the upgrade;*** *this can cause the system to fail to recover, requiring factory service to repair.*

Configurations

Load Factory Default: Click "Load" to restore all menu settings to the default values. User Account, Network IP Settings, and Time are not affected. 3GP streaming is disabled by default.

Load From USB: Click "Load" to upload saved DVR configuration settings from a USB flash device.

Save To USB: Click "'Save" to save the current DVR configuration settings to a USB flash device.

Language: Choose which language the DVR uses. The available languages may vary based on region.

5.9.6 Quick Archive

Select the time interval that the DVR should wait before archiving recorded material to the archive space.

5.10 INFORMATION

Below is a screenshot of the **INFORMATION MENU**. This menu displays important (read only) system information.

5.10.1 System

System

Version: Displays the firmware version number.

Model: Displays the DVR model number.

NTSC/PAL: Displays the current video format (i.e. the format that was auto-detected on the Channel 1 input during boot-up).

Network

IP: Displays the DVR's current IP Address as set in the Network or Express Setup screen.

MAC: The unique address of the DVR's internal network card. This option cannot be changed.

DVR Name: Displays the DVR's DDNS name, if configured.

Network ID: The ID number for the PowerCon alarm network as set in the Alarm Server screen.

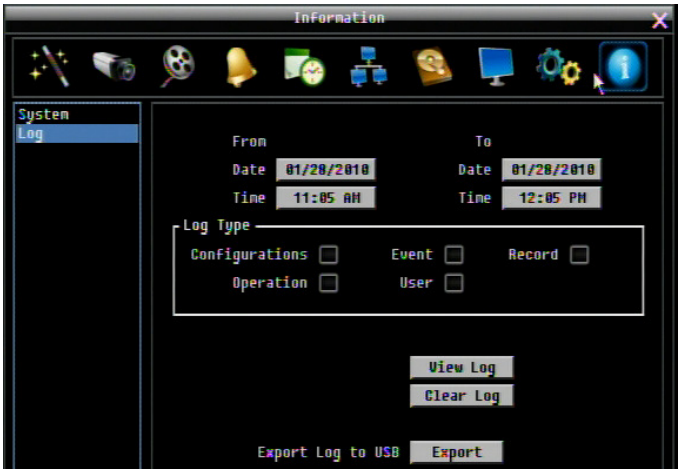
Status

Disk: Displays the status of the installed disk(s); normal disk operation is indicated by "OK".

Fans: Displays the status of the fans; normal fan operation is indicated by "OK".

5.10.2 Log

This screen is used to choose, display and/or export log entries.



From

Date: Select starting date of log to be displayed.

Time: Select starting time of log to be displayed.

To

Date: Select end date of log to be displayed.

Time: Select end time of log to be displayed.

Log Type:

Configurations: to see log entries related to configuration changes.

Event: to see log entries related to events.

Record: to see log entries related to recording changes.

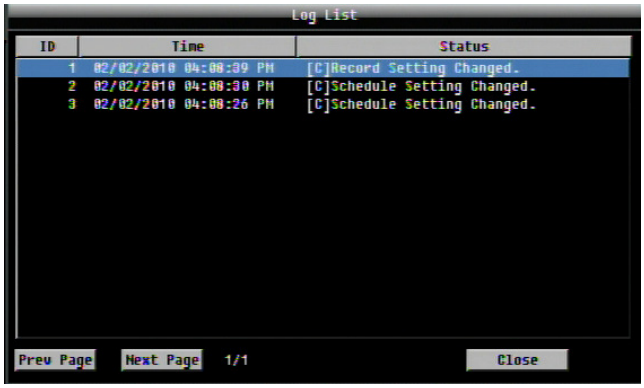
Operation: to see log entries related to operation changes.

User: to see log entries related to user access.

View Log: Press “View Log” button to view the log. See the image below for more detail.

Clear Log: Press “Clear Log” button to clear the log.

Export Log to USB: Press “Export’ button to export log data to USB.



Log List:

Prev Page: Go to the previous page of the log.

Next Page: Go to the next page of the log.

Close: Close the Log List window.

Chapter

6

6 NETWORKING OVERVIEW

This chapter will give you a basic instruction on how to set up the DVR for network connection. It is highly recommended that you have a working knowledge of what a network is and how it works. This will be helpful in completing the networking process.

6.1 INTRODUCTION TO TCP/IP

TCP/IP is the group of protocols used by the Internet and most Local Area Networks (LANs) throughout the world. In TCP/IP, every computer or other communications device that is connected to the network has a unique IP address. By doing this you are giving your device a unique address similar to the address of your house. An IP address is composed of four octets (numbers in the range of 0 to 255) separated by decimal points. The IP address is used to uniquely identify a host or computer on the LAN. For example, one computer on a network could have an IP address of 192.168.1.127.

You should never give two or more devices the same exact IP address, but the first three octets of an IP address is often the same for all computers in the local area network. For example, if a total of 253 computers exist in a single LAN, the IP addresses could be assigned starting with 192.168.1.*x*, where *x* represents a number in the range of 2 to 254. An IP address could be compared with a telephone number.

6.2 SUBNET MASKS

Each host in a LAN has a subnet mask. The subnet mask is a set of octets that is used to determine which LAN or class it belongs to. The number 255 is usually used to represent the network address portion of the IP address and a zero is placed at the end to identify the host portion of the address. Basically the subnet mask tells the devices how the network addresses are organized, and helps to determine which addresses are local and which are remote (on the other side of the router).

6.3 GATEWAY ADDRESS

Addressees are either local or remote. A *gateway address* is composed of four octets separated by decimal points. The gateway address is used to uniquely identify the device on the LAN that has access to the communications links connecting to other LANs, WANs and/or the Internet (access to the 'remote' addresses).

6.4 VIRTUAL PORTS

A **port number** represents a "channel" or entryway for network communications. Port numbers allow different computers to utilize network resources without interfering with each other. Port numbers most commonly appear in network programming, particularly socket programming. Sometimes, though, port numbers are made visible to the casual user. For example, some websites on the Internet use a URL like the following:

http://www.sitename.com:8100/

In this example, the number 8100 refers to the port number used by the browser to connect to the web server. The standard port number used by web sites is 80, so this number does not need to be included with the URL (although it can be). In IP networking, port numbers can theoretically range from 0 to 65535. Most popular network applications, though, use port numbers at the lower end of the range (such as 80 for HTTP). Ports are similar to doors and windows of your house, with port 80 acting as the front door. If these are not open you could not enter the house. This is the same case with ports on a network. If the ports for a specific IP address are not open then you could not gain access to that IP address.

> **Note:** *The term port also refers to several other aspects of network technology. A port can refer to Ethernet connection points, such as those on a hub, switch, or router. The term port is also used to refer to a physical connection point for peripheral devices such as serial, parallel, and USB ports.*

Another analogy would be: if a WAN IP address is similar to the phone number identify a site, IP ports are similar to telephone extensions, in that they allow communication with specific devices within a site that all share the same external (WAN) IP address. A router is a device which allows multiple computers and other IP enabled equipment to share that single WAN IP address. It functions like a "switchboard operator" – opening ports creates an association between those port numbers and the LAN IP address of specific equipment on the LAN behind the router. When the router sees a 'call' for a specific 'extension' (port), it directs that data stream to the (LAN IP address of the) equipment associated with that 'extension' (port).

6.5 PRE-INSTALLATION

Before beginning the installation, please answer the following questions:

Do you have Hi-speed Internet? _____

There are many types of high speed Internet available. The most common ones are T1, Cable, and DSL (in order of speed). The DVR is not compatible with a dial-up connection.

- **Note:** *EverFocus suggests having a minimum upload speed of 256KBps. This can be addressed by your Internet Service Provider.*

What type of modem/router do you have? _____
Modem/router model name/ #

The modem/router was either installed by your Internet service provider or purchased by you to establish a connection to the Internet. A router assigns different internal IP addresses to local computers; this allows multiple computers to access the Internet through the same external IP address.

Do you have a static IP address? _____

A Static IP address means you use the same IP address every time you connect to the Internet. With a static IP address, other Internet users always know the address of your location and can easily connect with it. This makes it much simpler to host a website, email server, or other type of server connection. Everfocus suggests using a static IP address. If this is not available, you will need to use a dynamic IP address. This is explained below.

Do you have a dynamic IP address? _____

A Dynamic IP address means your IP address changes each time you connect to the Internet. We recommend asking your Internet service provider for a Static IP address. If this is not a possibility, you may use the DDNS feature of the DVR. DDNS stands for Dynamic Domain Name Server, a service that provides a central database

where IP information can be stored and retrieved. It allows those using a dynamic IP address to be registered centrally so users can connect to it by name. See Chapter 7 for details on using EverFocus DDNS.

What type of DVR are you installing? _____

The default ports are
PARAGON264: 80
Paragon: 80
ECOR: 80, 1600
EDR/EDVR: 80, 1600, and 37260 – 37263

If the ports were changed in the Network Setup, use those port numbers.

6.6 WHAT IS YOUR NETWORK SETUP?

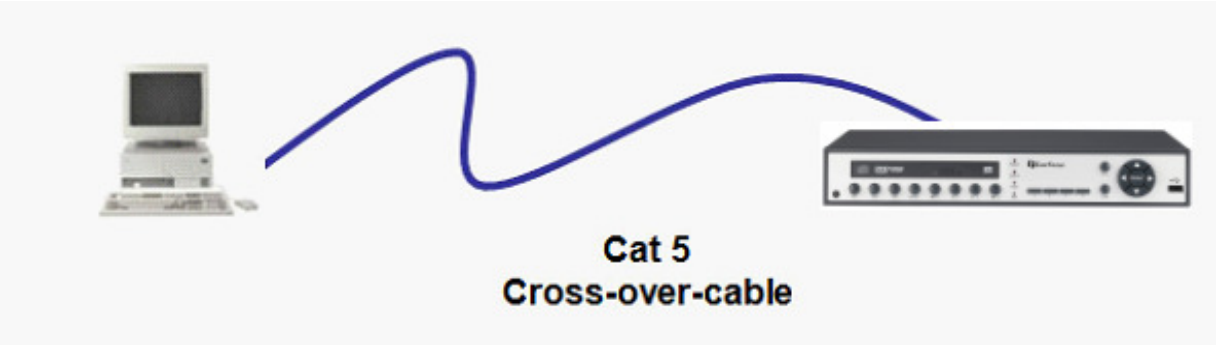
Everfocus DVR's can operate using one of three types of networking connections.

1. Simple One-to-One Connection: A simple one-to-one connection is the simplest type of network connection. Use a **cross-over cable** to make a direct connection from your computer to the DVR).

2. Direct High Speed Modem Connection: A direct modem connection uses a **standard network cable** to connect the modem directly to a computer (or in this case a modem to the DVR). This type of connection only covers single-port modems. For a combination modem/router, use the setup described below.

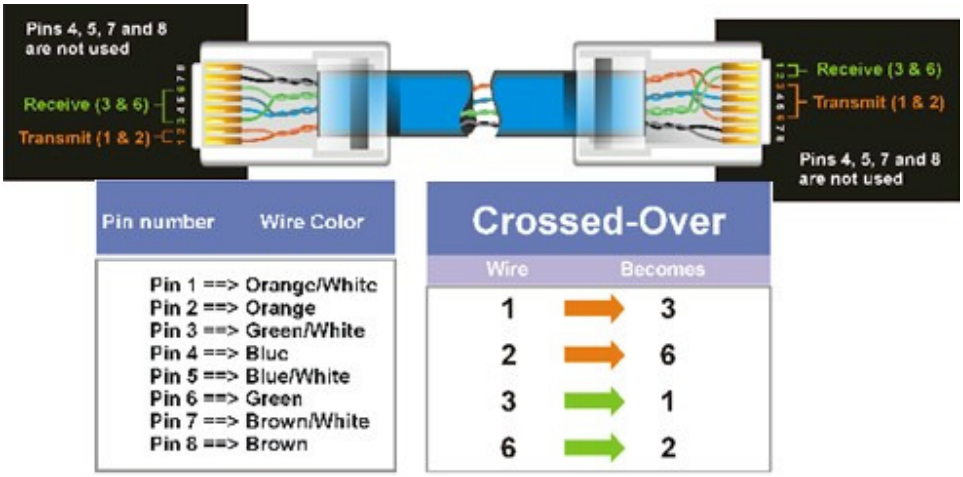
3. Router or LAN Connection – A local area network connection requires either a router or a pre-existing LAN connection. This is the most common type of connection. A router allows multiple computers and DVR's to access each other as well as the Internet. It assigns different internal IP addresses to the computers.

6.7 SIMPLE ONE-TO-ONE CONNECTION



Cross-over Ethernet Cable Pin outs:

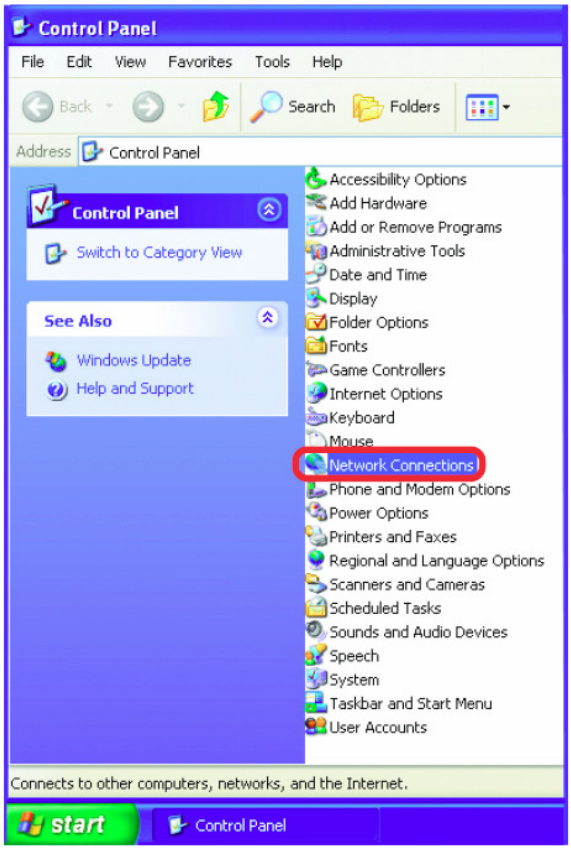
The Figure below shows the pin configurations for a cross-over cable.



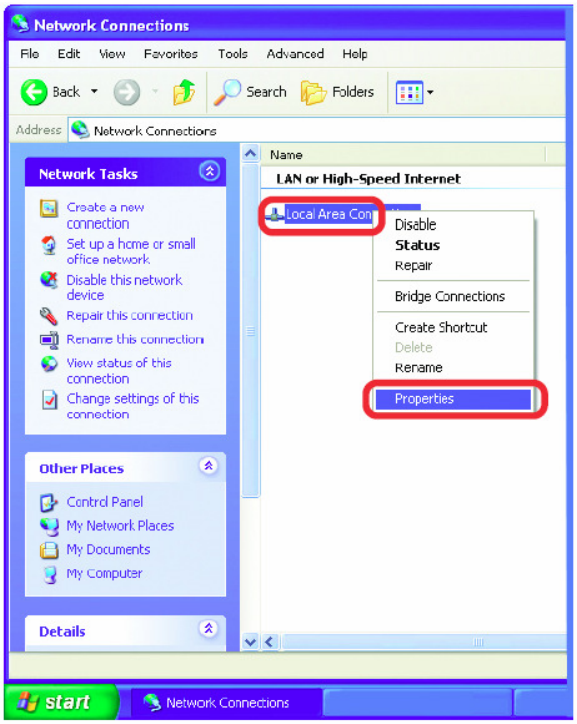
Connection Procedure:

- The First step is to **purchase or make a cross-over cable**. We recommend purchasing one if you have never made a cross-over cable. Please remember you can **not** use a straight-through network cable for this application.
- Once you have a cross-over cable, plug one end into the LAN port on the back of the DVR and the other into the network card's connector (LAN port) on the back of the computer.
- Log into the EverFocus DVR menu and go to the Network Setting Menu.
- You must use the Static IP option for this type of connection.
- Assign a Static IP of 192.168.001.003, a Subnet Mask of 255.255.255.000, and a Gateway of 192.168.001.001. You can ignore the DNS Server settings.
- The next step is to set the **computer's** network settings to match those of the DVR. On a Windows machine, you will need Administrator privileges to do this.
- To assign a Static (fixed) IP address in Windows 2000/XP, do the following :

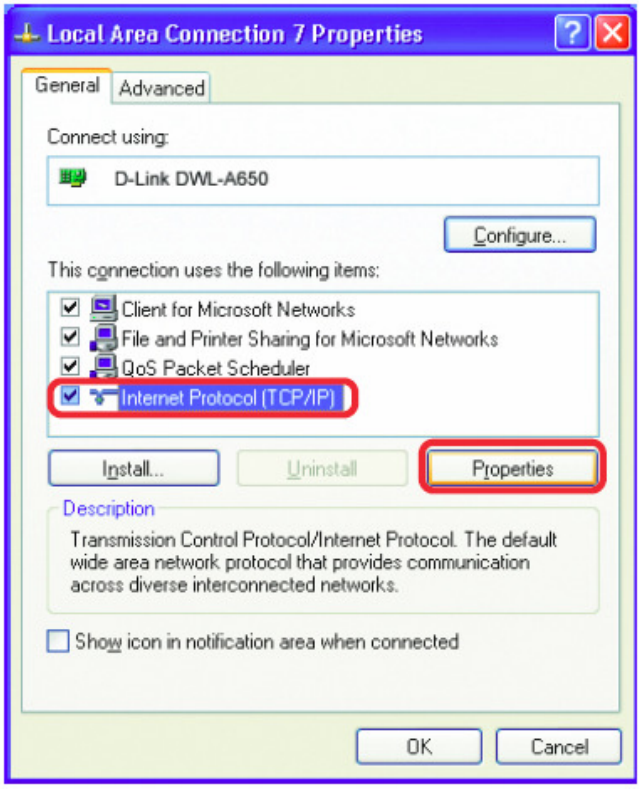
- Double-click on **Network Connections**



- Right-click on **Local Area Connections**
- Double-click on **Properties**



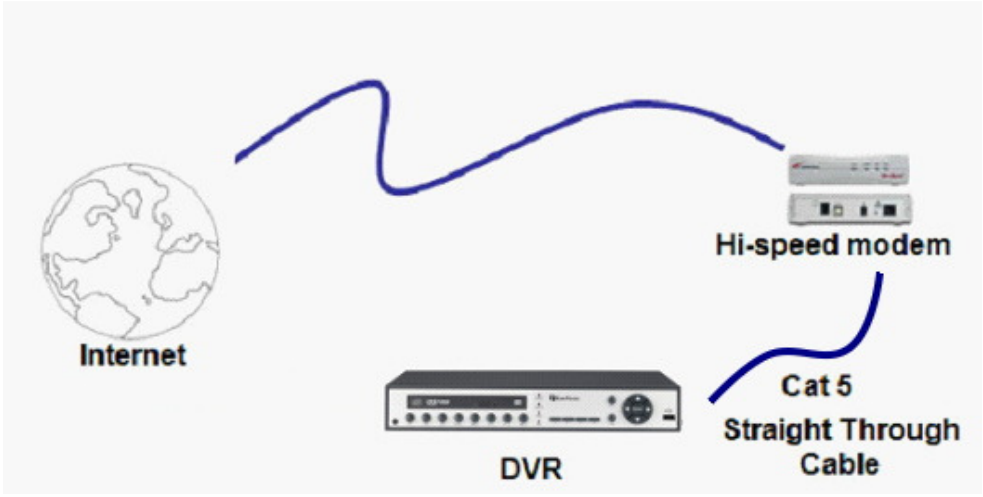
- Click on **Internet Protocol (TCP/IP)**
- Click **Properties**



- Click on the option that says “Use the following IP address”
- Assign an IP address of 192.168.1.2, a Subnet Mask of 255.255.255.0, and a Default Gateway of 192.168.1.1, then click OK.
- Restart both the computer and the DVR.
- To access the DVR from the computer, simply open Internet Explorer and in the address bar type:

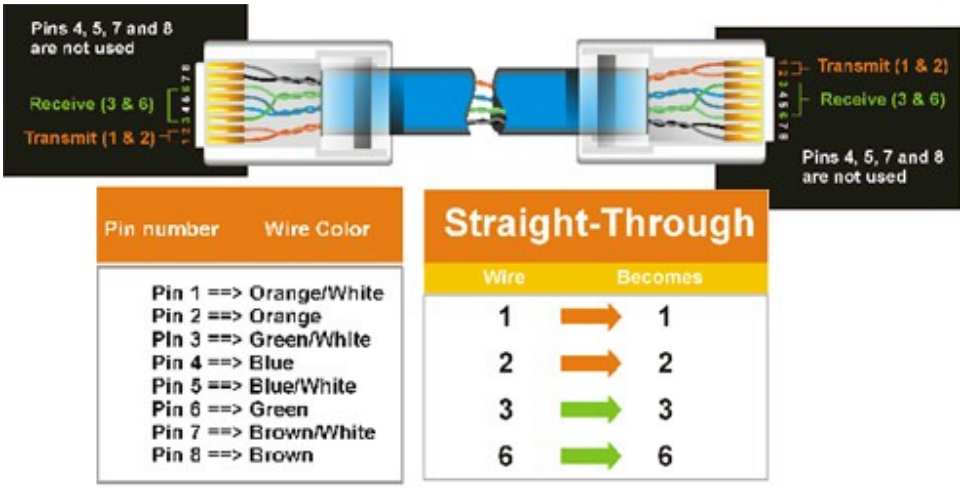
  http://192.168.1.3

6.8 DIRECT HIGH-SPEED MODEM CONNECTION



Straight-Through Ethernet Cable Pinouts:

The Figure below shows the pin configurations for a straight-through cable (standard network cable).



Connection Procedure:

- The first step is to purchase or make a **straight-through cable** (standard network cable). We recommend purchasing one if you have never made a straight-through cable. Please remember you can **not** use a cross-over network cable for this application.

- Once you have a straight through cable plug one end into the LAN port on the back of the recorder and the other into the high-speed modem.

- Log into the EverFocus DVR menu and go to the Network Setting Menu.

- Input the Static IP address, the Subnet Mask, and the Gateway that you obtained from your internet service provider.

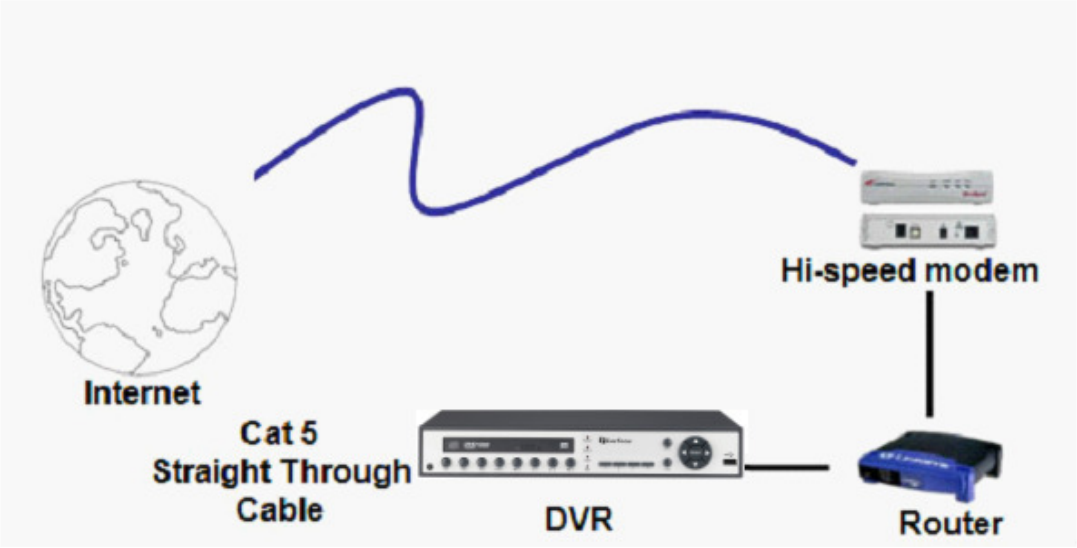
- **Note:** *If you have a dynamic IP address, you can set the DVR to DHCP to automatically detect the network settings. However, if you want to access the DVR over the Internet (not just over a LAN), it is highly recommended that you use a static IP address.*

➢ Exit from the DVR's Menu to save the settings.

➢ To access the DVR from a computer, open Internet Explorer and in the address bar type:
http:// (the static IP address given by your internet service provider)

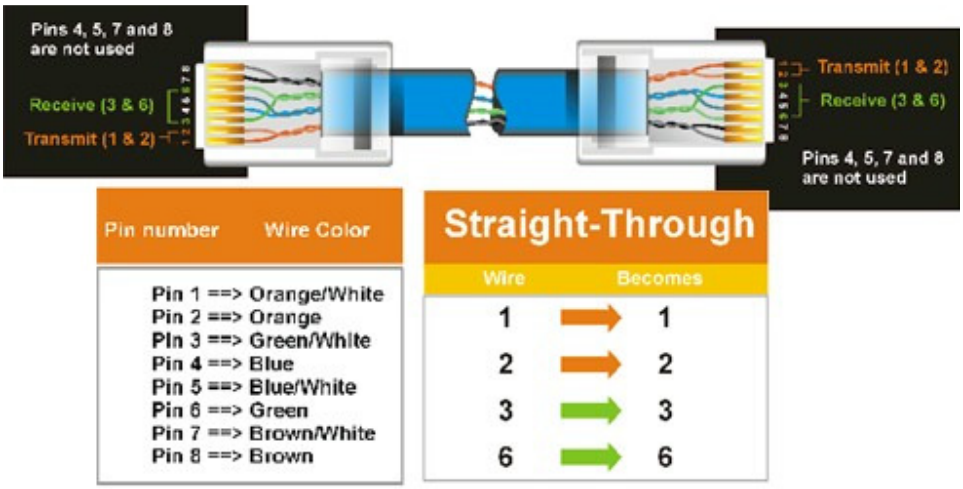
- ***Note:*** *When using this type of connection, only one device can be connected to the modem at a time. You will need to use a computer at a different location to test the connection.*

6.9 ROUTER OR LAN CONNECTION



Straight-Through Ethernet Cable Pin outs:

The Figure below shows the pin configurations for a straight-through cable (standard network cable).



Connection Procedure:

- The First step is to purchase or make a straight-through cable (a standard network cable). We recommend purchasing one if you have never made a straight-through cable. Please remember you cannot use a cross-over cable for this application.

- Once you have a straight-through cable, plug one end into the LAN port on the back of the DVR and the other into the router.

- Using the DVR's mouse or front-panel buttons, log into the EverFocus DVR go to the Network Setting menu.

- **To let the router automatically assign an address (dynamic IP address):**

  - Set the Network Type to DHCP. The DVR will display the dynamic IP in the setup field. Make sure to write down the IP address and the Gateway.

  - Exit from the Menu to save settings.

To manually assign an address (static IP address – THIS IS HIGHLY RECOMMENDED if you want to access the DVR over the Internet and not just over a LAN):

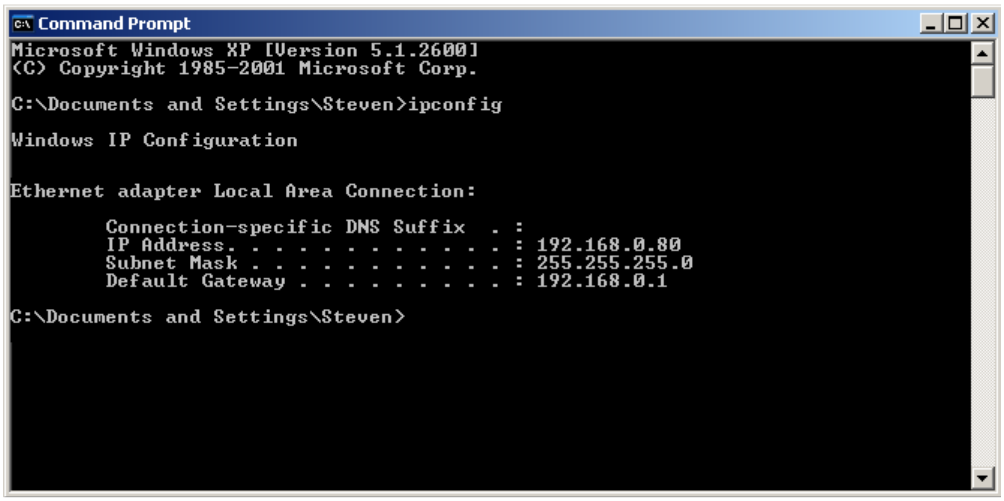
- Go to a computer connected on the same network as the DVR.

- **To get the computer's IP address,** click on the Start button and choose Run.
  - If using Windows Vista, choose Search instead.

- Type "command" and click on OK.
  - In Vista, you will need to double-click on the "Command Prompt" file to open it.

- In the DOS prompt, type "ipconfig" and press Enter.

- The network information will be displayed on a screen similar to the one below.
  - In Windows Vista, look for the information that says "IPv4".


Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\Steven>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.0.80
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1
C:\Documents and Settings\Steven>

- Take the computer's values for Subnet Mask and Default Gateway and input them into the DVR; these values **should be exactly the same** in both devices. **However, you should change the last number of the IP address.** For example, if the IP address of the computer is 192.168.2.101, the DVR's IP address should be 192.168.002.050.

➢ To access the DVR from a computer, simply open Internet Explorer and in the address bar type:
http:// (IP address of the DVR)

- **Note:** *The DVR's IP address will only work at the location of the DVR. To connect from a different location over the Internet, see below.*

To set DVR for Internet Connection through router

➢ The next step is to open ports within your router. Log into the router using a PC and open the following ports.

- Ports to open: 80
- If your Internet service provider blocks port 80, you can change it to a different port in the DVR's Network Menu Setup; open/forward that port instead.
- If you are using a Linksys or D-Link router, see Chapter 8 for basic support on setting up ports. For any other router, you will need to contact the manufacturer for support.

➢ To access the DVR from a computer simply open Internet Explorer and in the address bar type:
http:// (the IP address given by your internet service provider)

- **Note:** *If you changed to a different port other than 80, you will need to include this at the end of the IP address*

http:// (the IP address given by your internet service provider):portnumber

➢ If you have a WAN Dynamic IP address and have opened the ports, go to Chapter 7 to setup DDNS.

Chapter

7

7 REMOTE OPERATION FROM BROWSER

7.1 CONNECTING TO THIS DVR

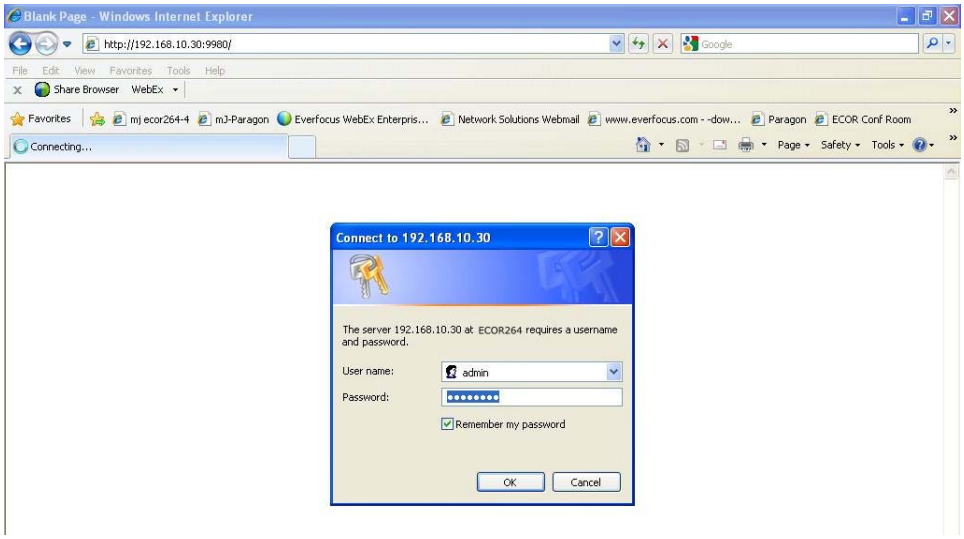
To access the DVR from a computer, open an Internet Explorer window and type the IP address in the address bar.

- Note: *The Paragon264x1-16CH DVR supports browsers of Microsoft IE9 or earlier with all 32-bit operating systems except the Server series.*

  Local connection: http:// (IP address from the DVR's Network Menu): (IP port used)
  e.g. http://192.168.1.163:2468

  Internet connection: http:// (IP address given by your Internet Service Provider): IP port used
  e.g. http://57.182.67.204:2468

  You should then see a login prompt.

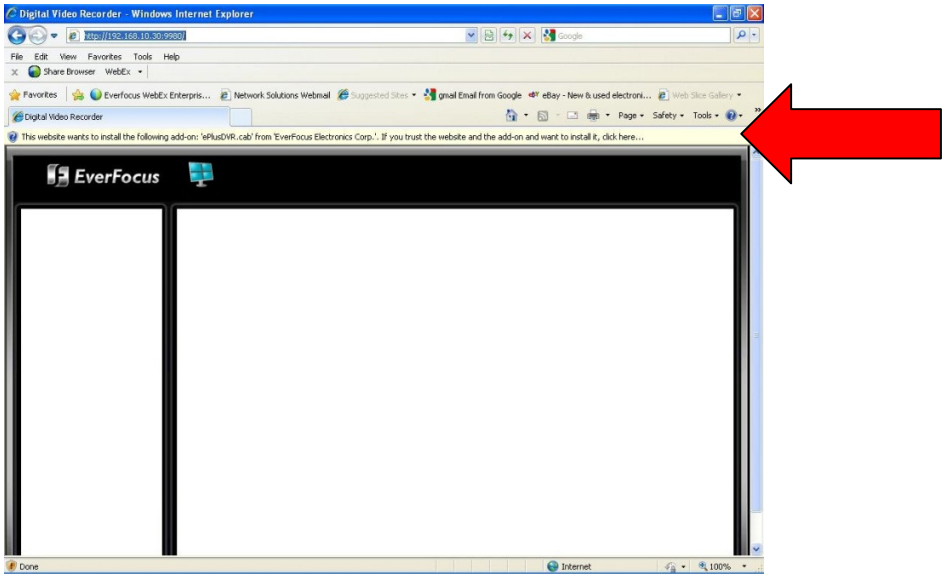


- The login page will appear on the screen similar to the one shown above.
- Enter a user name and password to access the recorder. These can be changed in the System section of the Main Menu.
- The default user name is "admin". The default password is "11111111".
- Click on the Login button and you will log in to the recorder's Network Viewer.

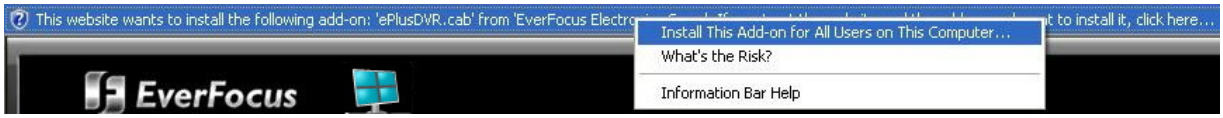
7.2 BROWSER SECURITY SETTING

7.2.1 Installing ActiveX controls

When you first connect to the DVR's IP address, you should see a screen like the one below. If you do not see a yellow bar like the one the arrow is pointing at, your security settings may be too high. If so, go to "Section 6.2.2 - Enabling ActiveX Controls."



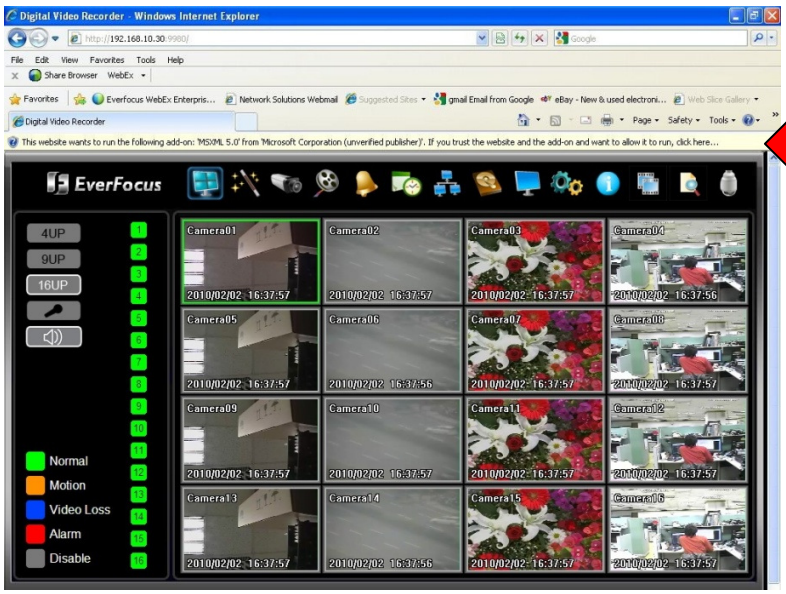
Right click on the yellow bar and select "Install This Add-on…"



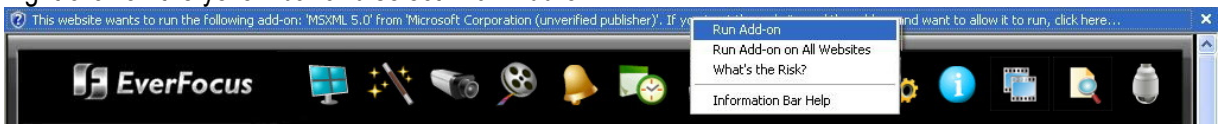
Install the ePlusDVR.cab file when prompted to do so.

Internet Explorer - Security Warning
Do you want to install this software?
Name: ePlusDVR.cab
Publisher: EverFocus Electronics Corp.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Once the file finishes installing, you will return to the screen like the one below.



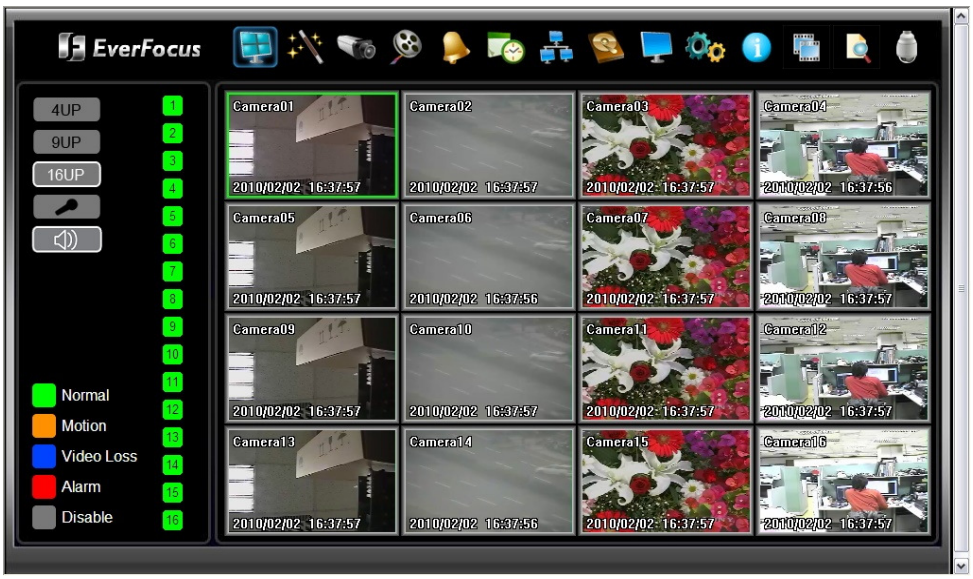
Right click on the yellow bar and select “Run Add-on…”


This website wants to run the following add-on: 'MSXML 5.0' from 'Microsoft Corporation (unverified publisher)'.
and want to allow it to run, click here...
EverFocus
Run Add-on
Run Add-on on All Websites
What's the Risk?
Information Bar Help

Install the MSXML file when prompted to do so.

Internet Explorer - Security Warning
Do you want to run this ActiveX control?
Name: MSXML 5.0
Publisher: Microsoft Corporation (unverified publisher)
Run
Don't Run
This ActiveX control was previously added to your computer when you installed another program, or when Windows was installed. You should only run it if you trust the publisher and the website requesting it.
What's the risk?

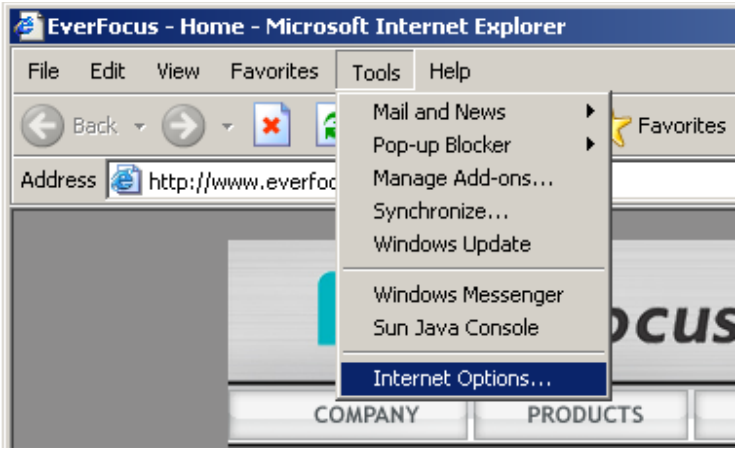
Now, you will able to see the remote live page.



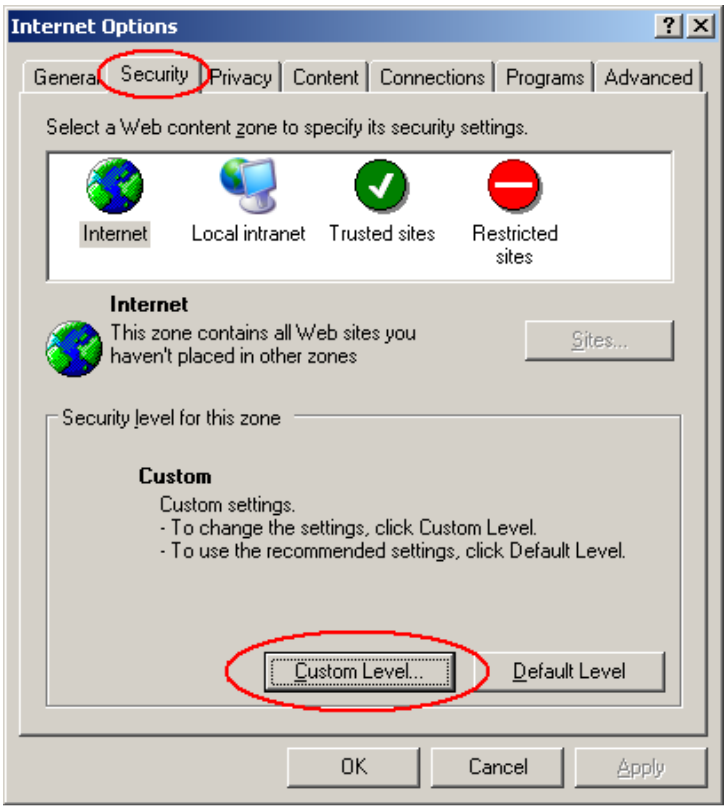
7.2.2 Enabling ActiveX Controls

Note: *This section is only necessary if you DO NOT see the yellow ActiveX bar at the top of your browser screen when you first connect to the DVR.*

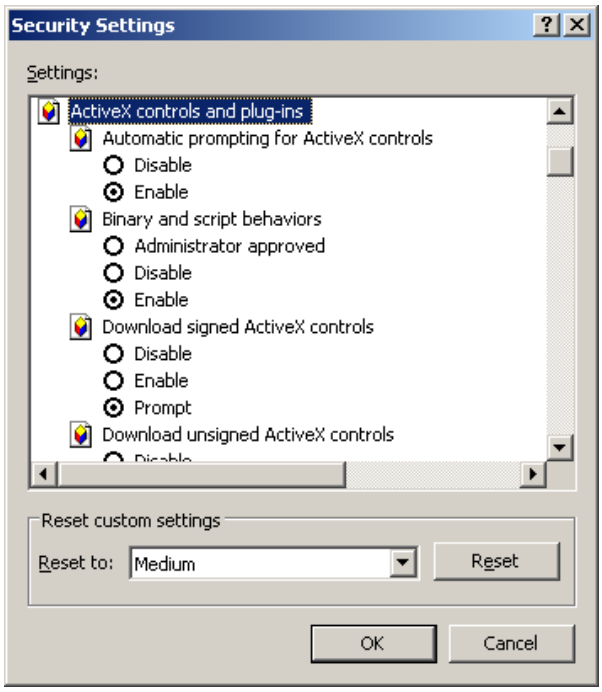
At the top of the Internet Explorer Window, click on Tools, then select Internet Options.



Click the Security tab at the top of the window, then choose Custom Level near the bottom.



In the Security Settings window, scroll to “ActiveX controls and plug-ins”



Set the controls as follows:

“**Enable**”:
- ✓ Allow previously unused ActiveX controls to run without prompt (*Internet Explorer 7 only*)
- ✓ Allow scriptlets (*IE7 only*)
- ✓ Automatic prompting for ActiveX controls
- ✓ Binary and script behaviors
- ✓ Display video and animation on a webpage that does not use external media player (*IE7 only*)
- ✓ Run ActiveX controls and plug-ins
- ✓ Script ActiveX controls marked safe for scripting

“**Prompt**”:
- ✓ Download signed ActiveX controls
- ✓ Download unsigned ActiveX controls

“**Disable**”:
- ✓ Initialize and script ActiveX controls not marked as safe

Click OK and then choose Yes to change the security settings.

Close the window so you are back at the login screen. Click the Refresh button to reload the page.

Install the ePlusDVR.cab file when prompted to do so.

Internet Explorer - Security Warning
Do you want to install this software?
Name: ePlusDVR.cab
Publisher: EverFocus Electronics Corp.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Once the file finishes installing, you will return to the same login page as before. Type in the user name and password and click Login to view the cameras.
Default user name: admin
Default password: 11111111.

7.3 REMOTE LIVE VIEW VIA SMART PHONE

You can now get remote access to your EverFocus DVRs and view all their camera feeds remotely from any web-capable smart phone and via any web browser. (These DVRs include EverFocus' "High Definition", "Paragon", "Paragon264", and "ECOR264" lines of DVRs). Of course, you can also access your EverFocus DVRs from any web-connected computer, simply by entering the DVR's IP address or DDNS name in your web browser (see Section B below and Section 7.1 and 7.4).

To Live View from a smart phone, you first need to make sure that the DVR, its router and your smart phone is configured correctly. Please follow the following procedure (A or B).
Please note that the examples provided below are for general use only. Your system may require different values. STEPS 2, 3, and 4 ARE ONLY FOR IF YOUR CURRENT CONNECTION SETUP DOES NOT WORK – IGNORE THEM IF YOU DO NOT EXPERIENCE CONNECTION PROBLEMS. If the values provided below do not solve any problems you may have, please contact your Internet Service Provider for the appropriate settings:

A) LIVE VIEWING **WITH** THE MOBILEFOCUS APP:

1) Download and install the **MobileFocus App** on your smart phone:
    a. For an Android phone this app can be downloaded from Android Market and for the iPhone it can be downloaded from the iTunes store. The BlackBerry version can be downloaded from this link – http://www.everfocus.com/blackberry/MobileFocus.jad
    b. A detailed guide on downloading and using MobileFocus can be found at this link – http://www.everfocus.com/mobilefocus.cfm

2) In your DVR's user interface, **enter this static IP address for your DVR**:

    NOTE: The static IP address prescribed in this section should **only be used if the DVR does not already have a static IP** address. This address is intended for relatively simple network environments, like that of a home or small retail outlet. If you cannot access your DVR via the Internet after completing this procedure, it would mean that your LAN (private network) is probably more complex and you need to ask your Internet Service Provider (ISP) to give you a suitable static IP address for your DVR.
    a. On your DVR, right-click to open the main menu bar and then click this sequence: Configuration > Network Setting > LAN.
    b. In the Network Type field, select "Static IP".
    c. In the IP field, enter 192.168.1.50
    d. Subnet Mask : 255.255.255.0
    e. Gateway : 192.168.1.1
    f. DNS Server 1 : 192.168.1.1 (you can leave the "DNS Server 2" field blank)
    g. HTTP Port : 80 (if this default port number has changed, note the new number and enter it in the "HTTP Port" fields below – if this port is blocked by your ISP, ask them to unblock it or enter a high number like "549839")

3) **Enter your DVR's static IP address in your Router/Access Point's 'Port Forwarding' setup page**:
    a. Access the user interface of the Router/Access Point that is connected to your DVR. (This is usually done by entering the router/AP's IP address in your web browser's address bar. See your router/AP's manual for details.)
    b. In the router's user interface, navigate to the Port Forwarding setup page.
    c. Add your DVR's details: External Port = 80; Internal IP = 192.168.1.50 (as in Step 2 above); Port = 80 (or whatever HTTP port you selected in Step 2.g. above).
    d. If you need to add another DVR to this router's Port Forwarding table (i.e. if another DVR is also connected to the router and you also want to view that DVR's camera feeds remotely), give the second DVR the same IP address but let it end with "51" instead of "50" (see Step 2.c. above), and then External Port = 8080, Port = 80 (no change – remember that this port should be the same as what was selected in Step 2.g. above).
    e. If you need to add a third DVR, the IP address should end with "52" and then External Port = 8888, Port = 80 (or whatever HTTP port you selected in Step 2.g. above).
    f. Remember to save/confirm your new settings.

4) In your DVR's user interface, **register a DDNS name for your DVR** with a DDNS service (EverFocusDDNS or dyndns.org):
   a. On your DVR, right-click to open the main menu bar and then click this sequence: Configuration > Network Setting > DDNS.
   b. Select which DDNS Service you want to use.
   c. If you have selected the EverFocus DDNS service, enter a name for your DVR (click on the DVR Name input field to open the on-screen keyboard) and then click the Register/Update button.
   d. If you have selected the dyndns.org service, enter the Host Name, Username, and Password as provided by that service when you registered (click on the DVR Name input field to open the on-screen keyboard).
   e. If you need more information, please refer to the DDNS section in this User Manual.
   f. Write down the full DDNS name (e.g. "DVR123.everfocusddns.com") for later use (see below).

5) In your DVR's user interface, **switch on the Mobile Stream (Sub Stream)**
   a. On an ECOR264-series DVR, right-click to open the main menu bar and then click this sequence: Configuration > Network Setting > Remote/Mobile. Check the H.264 box to make this the codec of the Mobile Stream (Sub Stream) ONLY IF you want to view via an iPhone or an Android-based phone (and via MobileFocus). You can also select MJPEG for these two phone types, but H.264 is recommended for high-bandwidth network conditions. For Blackberry and ALL OTHER phones, check the MJPEG box.
   b. On the Paragon264 and High Definition lines of DVRs the "Enable Mobile Viewing" box should be checked (Configuration> Network Setting > LAN) for mobile viewing from **any smart phone**. This will automatically switch on an MJPEG substream.

6) **Configure your smart phone:**
   a. On your smart phone's home page, tap on the MobileFocus app's icon to open it.
   b. Tap the Add Device icon (on the iPhone this is a + sign at the top right of the MobileFocus screen).
   c. In the Site Name field, enter an easy-to-remember name for the DVR installation you want to view.
   d. Model : Click this field to get a dropdown menu with all the EverFocus model names. Tap the model name of the DVR you want to view.
   e. Host : Enter the DDNS name here that you registered in Step 1 above (e.g. "DVR123.everfocusddns.com").
   f. Port : The default is 80. Only change this if you changed the HTTP Port setting on the DVR's LAN setup page.
   g. Username and Password : Enter the DVR's login values here.
   h. Mobile Stream : Switch this setting ON (this is called "Sub Stream" on an Android).

B) LIVE VIEWING **WITHOUT** THE MOBILEFOCUS APP:

The above-mentioned EverFocus DVRs can also be accessed via any web browser **from smart phones and computers** that do **not** have the MobileFocus app installed.

1) On an ECOR264-series DVR, the "MJPEG" substream option should be selected (Configuration> Network Setting > Remote/Mobile).
   On a Paragon264 or High Definition DVR the "Enable Mobile Viewing" box should be checked (Configuration> Network Setting > LAN).

2) Launch your smart phone or computer's web browser and enter this URL in the address bar:
   http://A.A.A.A:PPPP/m/live.htm – where "A.A.A.A" is the IP address of the DVR and "PPPP" is the number of the HTTP port used by the DVR. Alternatively, you can enter the DDNS name you registered for the DVR (see Step 2 above), and then add the address-line adapters – for example: http://yourDVRnamehere.everfocusddns.com/m/live.htm

3) You will be prompted for the login username and password to access the DVR. Please remember that the ID is case sensitive and the password is numeric.

4) Click on a channel button to select that channel's camera feed for viewing.

7.4 REMOTE LIVE VIEW VIA COMPUTER

1. Click on a camera number on the left side of the display to switch that camera to full screen. Click on “4UP” to display 4 screens, click on “9UP” to display 9 screens or click on “16IP” to display 16 screens.
2. You can click the “**Mic**” button to transfer audio to DVR from client side if there is a microphone attached to the PC and an amplifier and speaker attached to the DVR. You can also click the “**Speaker**” button to transfer audio to the client side from DVR if there is a speaker on the PC and a microphone and preamp attached to the DVR, and audio recording is enabled on the DVR. Double click on a camera image to enlarge the current display to full screen; double click again or press “Esc” to return to the normal view.
3. The status of each camera is represented by different colors on the left side of the screen. Green means normal; orange indicates a Motion alarm; blue indicates Video Loss, red indicates an alarm event and grey means disable
4. **Menu bar:** Menu buttons for setup, search and export, details are explained in following chapters.

Live View

Express Setup

Camera Setup

Record Setup

Alarm Setup

Schedule Setup

Network Setup

Hard Disk Setup

Display Setup

System Setup

Information Setup

Video Export

Playback Search

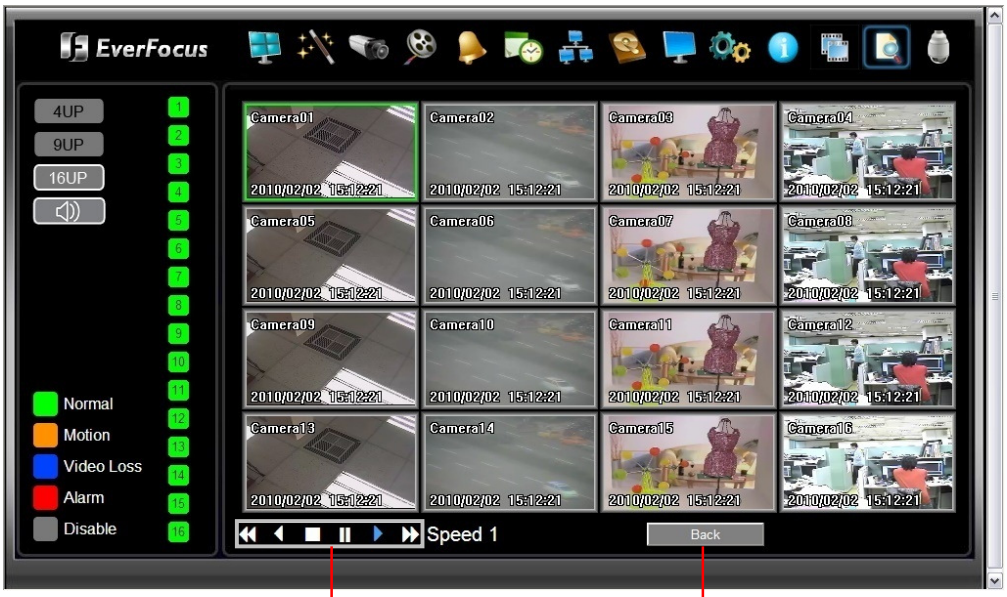
PTZ Control

5. In the main page, you will see live images in a 16-screen display.

7.5 REMOTE PLAYBACK

To playback the video, click the "Search" button. Select from "Time Search", "Event Search", or "Motion Search". For more details about Search setting, please refer to "4.9 Search Setting".

"Event Search" and "Motion Search" will show maximum 400 search result items (beginning with the start time)



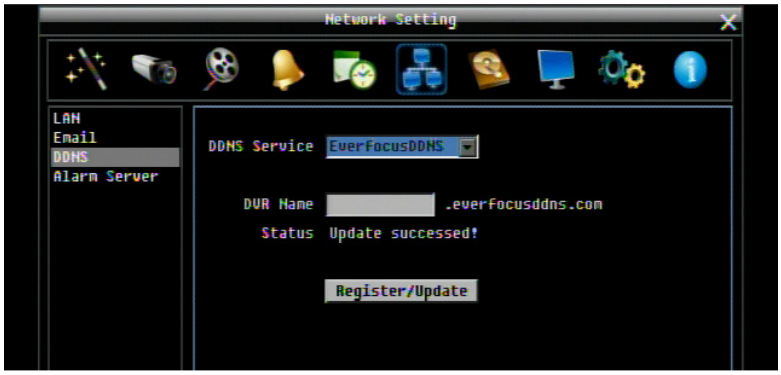
Playback Control Keys:

1. Fast rewind the video.
2. Play Reverse the video.
3. Stop playback.
4. Pause
5. Playback the video.
6. Fast forward the video.

Chapter

8

8 EVERFOCUS DDNS SETUP



Setup Steps:

Step 1. Set up the Network Setting menu according to the instructions detailed in the 5.6 Network Setting section. (Make sure that the DNS Server 1 is set correctly or DDNS will not work.)

Step 2. Go to the website http://everfocusddns.com and check for an available name.

Note: *This step is optional, though recommended, as it is used to check the availability of a host name. If the name is already used, an attempt to register that name must fail. If the name is available, proceed to step 3 for DDNS setup.*

Step 3. In the DVR's Network Menu, go to DDNS. Choose "EverfocusDDNS" for the Server and put in your chosen name in the DVR Name field.

PLEASE NOTE: The name of the DVR **cannot include a space, or a dot** (period) or **any special characters** particularly **~ ! @ # $ % ^ & * ( ) + < > " ; : . , _**

Step 4. Click (or select and press Enter) on the "**Register/Update**" button to synchronize the DVR with the DDNS server. You should see an indication of "Success" on the screen. If you see "Could Not Find Server" or any other error message instead, double-check your network settings and DDNS name and resubmit the DDNS name until you get "Success".

Step 5. You should now be able to connect by typing the name you created into the address bar.
Example: http://hostname.everfocusddns.com

It is not necessary to append the HTTP port number to the DDNS name. The EverFocus DDNS server not only keeps track of your DVR's IP address, it keeps track of the ports too!

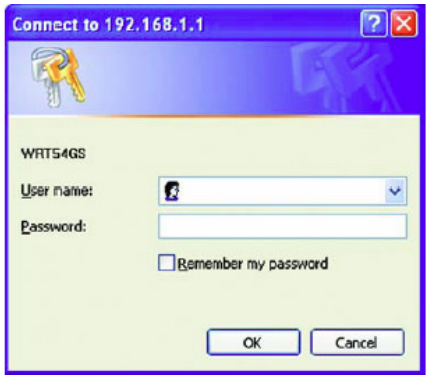
Chapter

9

9 LINKSYS & D-LINK PORT FORWARDING

9.1 TYPICAL LINKSYS PORT FORWARDING

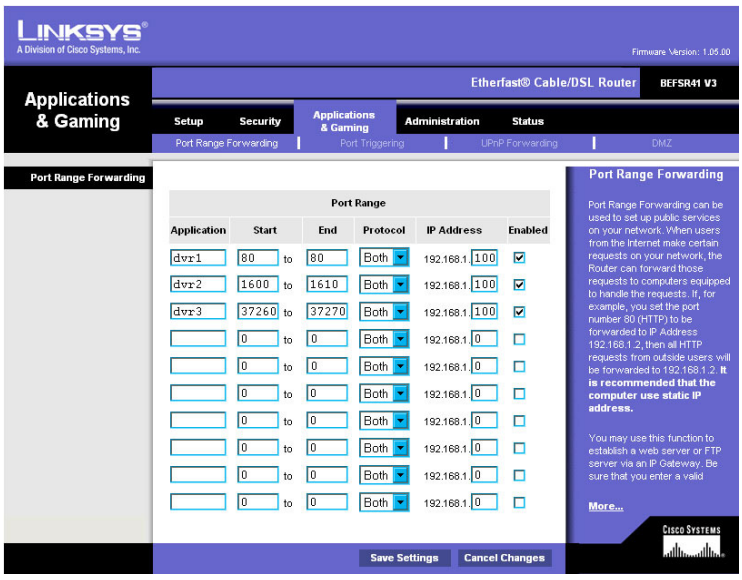
This section will cover a few simple configurations for the Linksys router. This chapter is only to offer some help to the installer and end user. Please understand we **DO NOT** support this product and will not give tech support on it. If you need additional technical support on this router you must call Linksys.



To access the Web-based Utility, launch a web browser and type the Router's IP address, typically **192.168.1.1**, in the address bar. Then press **Enter**. A password request page will appear. (Non-Windows XP users will see a similar screen.) Leave the *User Name* field blank. The first time you access the router, use the default password **admin**. Click the **OK** button to continue.

The first screen that appears displays the Setup tab. This allows you to change the Router's general settings. Change these settings as described here and click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel your changes.

Click on the "Applications & Gaming" tab.


LINKSYS
A Division of Cisco Systems, Inc.
Firmware Version: 1.05.00
Etherfast® Cable/DSL Router
BEFSR41 V3
Applications & Gaming
Setup
Security
Applications & Gaming
Administration
Status
Port Range Forwarding
Port Triggering
UPnP Forwarding
DMZ
Port Range Forwarding
Port Range
Application
Start
End
Protocol
IP Address
Enabled
dvr1 80 to 80 Both 192.168.1.100
dvr2 1600 to 1610 Both 192.168.1.100
dvr3 37260 to 37270 Both 192.168.1.100
Port Range Forwarding
Port Range Forwarding can be used to set up public services on your network. When users from the Internet make certain requests on your network, the Router can forward those requests to computers equipped to handle the requests. If, for example, you set the port number 80 (HTTP) to be forwarded to IP Address 192.168.1.2, then all HTTP requests from outside users will be forwarded to 192.168.1.2. It is recommended that the computer use static IP address.
You may use this function to establish a web server or FTP server via an IP Gateway. Be sure that you enter a valid
More...
Cisco Systems
Save Settings
Cancel Changes

Applications and Gaming allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Some Internet applications may not require any forwarding) To forward a port, enter the information on each line for the criteria required. Descriptions of each criterion are described here.

Application - In this field, enter the name you wish to give the application.

Start/End - Enter the starting number of the range under **Start** and the ending number under **End**.

Protocol - Enter the protocol used for this application, either **TCP** or **UDP**, or **Both**.

IP Address - For each application, enter the IP Address of the PC running the specific application.

Enable - Click the **Enable** checkbox to enable port forwarding for the relevant application.

When finished making changes, click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel them.

Here is an example for how the port information might look:

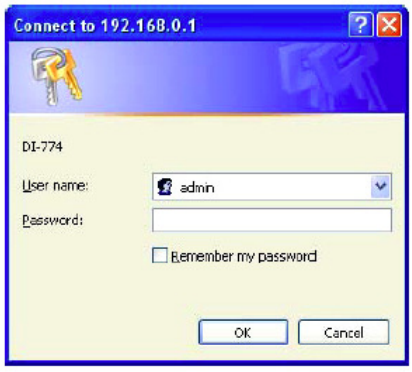
HTTP	80 to 80	Both	192.168.1.50	Enable

Where 192.168.1.50 is the IP address of the PARAGON264x1 on the LAN, and the default port 80 is in use.

Note: ***If you changed port 80 in the DVR's Network Menu, open that port instead of 80.***

9.2 TYPICAL D-LINK PORT FORWARDING

This section will cover a few simple configurations for the D-Link router. This chapter is only to offer some help to the installer and end user. Please understand we **DO NOT** support this product and will not give tech support on it. If you need additional technical support on this router you must call D-Link.



Whenever you want to configure your network or the DI-624, you can access the Configuration Menu by opening a web-browser and typing in the IP Address of the DI-264.

The DI-264 default IP Address is 192.168.0.1.

- Type "admin" in the **User Name** field
- Leave the **Password** blank
- Click **OK**

The first screen that shows up is the **Home Tab**. This is the starting point for all the router's settings and functions.

Click Virtual Servers on the left to bring up the screen shown on the right.

Virtual Servers allows users who are connecting remotely to access services on the router's Local Network. The functions of each field are described below.

Virtual Server - Select **Enabled** or **Disabled**

Name - Enter the name referencing the virtual service

Private IP - The IP address of the device running the

local services.

Protocol Type - The protocol used for the virtual service.

Private Port – The port number that the service uses on the LAN (Local Area Network).

Public Port - The port number that the services uses on the WAN (Wide Area Network).

Schedule – The time period the virtual server will be active.
When you have input all the information for a virtual server, click on **Apply** to add it to the list at the bottom or **Cancel** to clear all fields.

Here is an example of the information for each service:

Name	Private IP	Protocol	Private Port	Public Port	Schedule
HTTP	192.168.1.50	Both	80	80	Enable

Where 192.168.1.50 is the IP address of the PARAGON264x1 on the LAN, and the default port 80 is in use.

Note: ***If you changed port 80 in the DVR's Network Menu, open that port instead of 80***.

Chapter
10

10 TROUBLESHOOTING

If you have problems with the system, run through the following checklist to see if you can solve the problem.

- **The DVR will not go into record mode.**
  - Bring up the DVR's Menu and check the Camera Setting menu. Verify that all connected cameras are checked as "Installed" and that Record Mode is set to "Continuous" (Normal+Event).
  - Check the Disk or Information Menus and verify that the internal hard drive is being detected.

- **Nothing happens when I press the "Monitor" button to switch between the VGA and BNC main monitors**
  - Open the Menu Bar and click on the Monitor icon. Now, press the "Monitor" button again and keep it in for a few seconds. Make sure you have closed all configuration menus before pressing the Monitor button.

- **The DVR displays nothing on the main monitor.**
  - Make sure the monitor is connected to either the BNC Main Monitor port or the VGA port. If the monitor has multiple inputs, make sure it is set to display the correct input source and resolution (1024x768).
  - Check that the monitor cables are in working order and that the power is on.
  - Verify that the recorder is getting the correct supply power.

- **There is no display coming from one of the channels on the DVR.**
  - In the DVR's Camera Menu, make sure that all cameras are checked as "Installed" and unchecked for "Covert".
  - If there is still no picture, switch ports or connect a working camera to the port that has no picture. If you get an image, the problem is coming from the camera or cable.

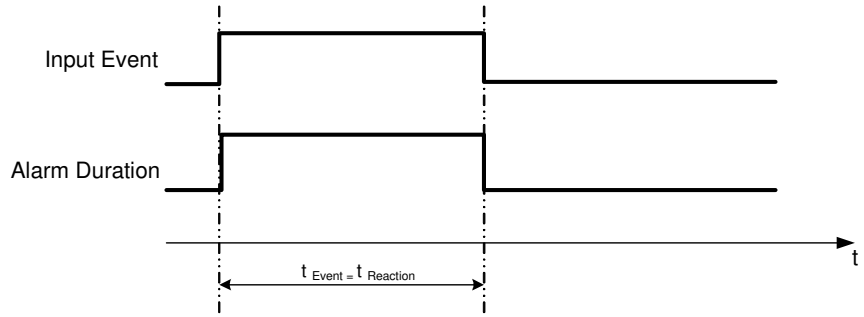
- **I cannot connect to the recorder via the internet.**
  - Check that you can connect to the DVR on the LAN.
  - Check that the DVR has a static IP address and the port used by the DVR is forwarded correctly to that IP address in the router.
  - Verify that your Internet Service Provider does not block the IP port being used
  - Make sure you are using the correct WAN IP address given by the ISP, or, if you have a Dynamic IP, check if the IP address has changed; use DDNS to avoid problems caused by changing ISP addresses.

Appendix

A

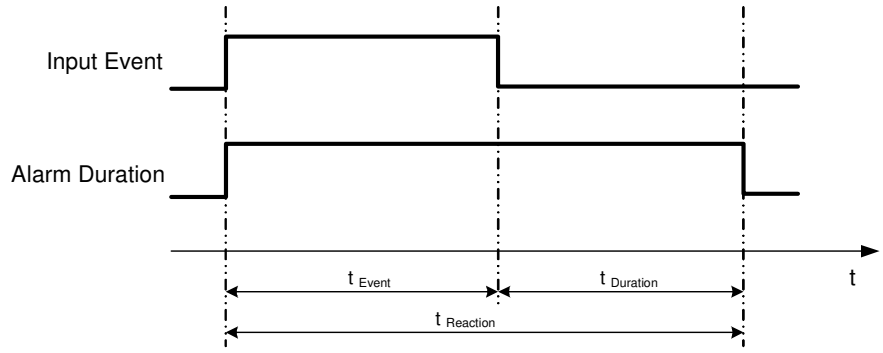
APPENDIX A: TIMING OF ALARM MODES

Transparent Mode



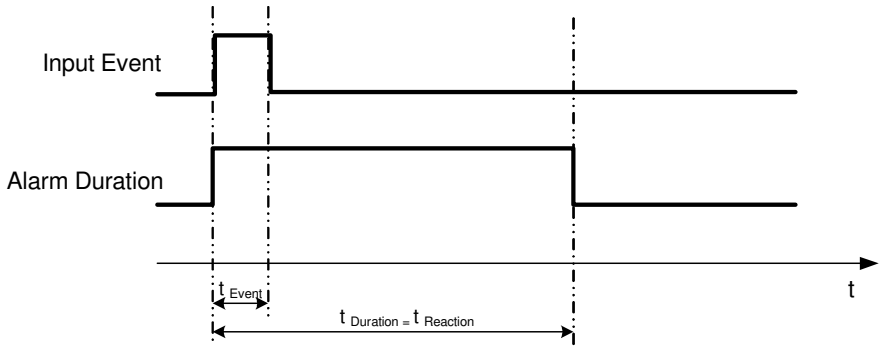
t Event: Duration of alarm input source (motion, contact, system events...)
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout + Transparent Mode



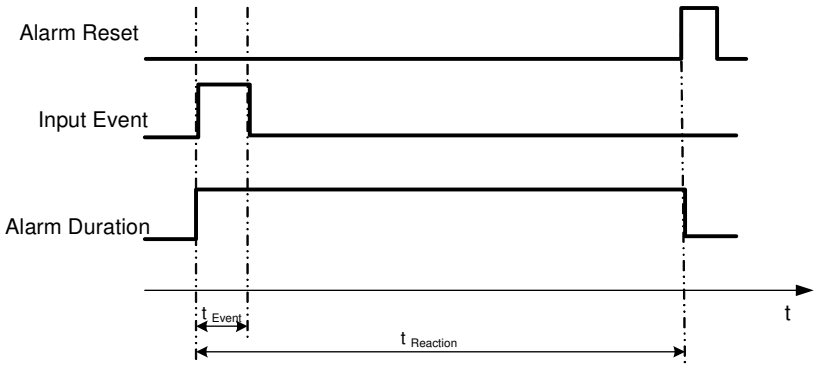
t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout Mode



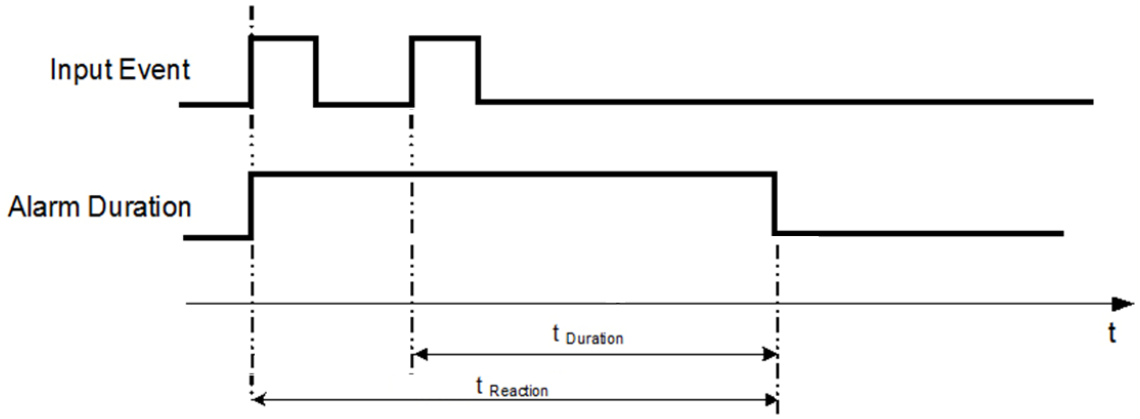
t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Permanent Mode



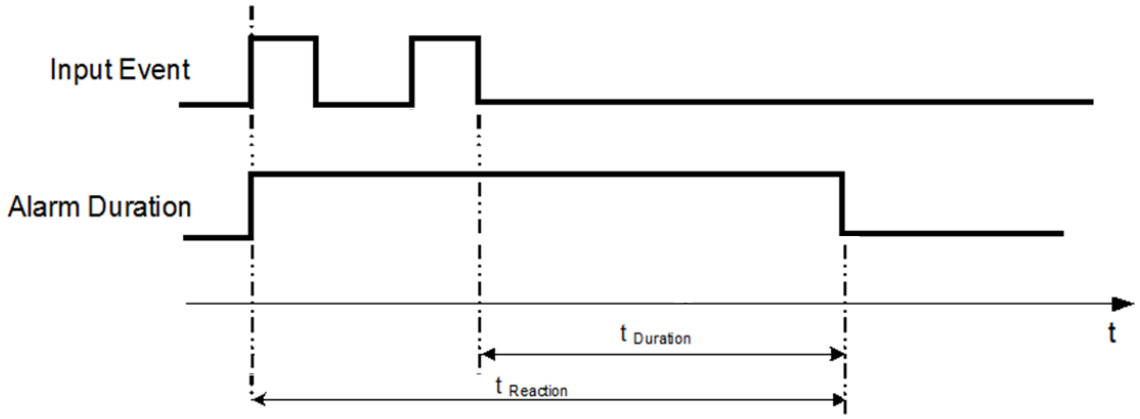
t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout Mode: Retrigger of Alarms



t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout+Transparent Mode: Retrigger of Alarms



t Event: Duration of alarm input source (motion, contact, system events...)

t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Appendix

B

APPENDIX B: EXPRESS SETUP RECORDING VALUE SELECTION RULES

Case 1:
Record Mode: Normal + Event Record With: Recording days

The DVR will automatically adjust the DVR's image quality and Event frame rate to match the number of Recording days which user selected:
According to resolution, event hours and other assumptions above, the DVR will attempt to select one set of suitable quality and event frame rate by checking if set 1 meets the requirements, and proceed in order unit the requirements are met. If the DVR can't match the required record days from one of the 8 sets, it will use set 8.

Checking Order	1	2	3	4	5	6	7	8
Normal Frame Rate	1	1	1	1	1	1	1	1
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate	30	30	30	15	10	7.5	5	1

Case 2:
Record Mode: Event Only Record With: Recording days
DVR will Auto adjust Quality and Event frame rate to match the Recording days which user need:
According to resolution, event hours and other assumptions above, the DVR will attempt to select one set of suitable quality and event frame rate by checking if set 1 meets the requirements, and proceed in order unit the requirements are met. If the DVR can't match the required record days from one of the 8 sets, it will use set 8.

Checking Order	1	2	3	4	5	6	7	8
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate	30	30	30	15	10	7.5	5	1

Case 3:
Record Mode: Normal + Event or Event Only
Record With: Preset Setting

DVR will apply the settings in the table below to all cameras according to the Preset Settings.

Preset Setting Option	Camera Item	Apply value
Best Quality	Quality	Superior
	Normal Frame Rate	Max recording frame rate of DVR
	Event Frame Rate	30
Standard Quality	Quality	Standard
	Normal Frame Rate	Half of max recording frame rate of DVR
	Event Frame Rate	30
Extended Quality	Quality	Basic
	Normal Frame Rate	1
	Event Frame Rate	10

Appendix

C

APPENDIX C: REMOTE CONTROL

The IR remote control is an accessory to enhance the convenient operation of the DVR. You can perform all the settings and operations from the remote control. The effective distance is up to 33 feet line of sight. The keypad functions are same as the front panel buttons of the DVR.

ID number here must correspond to the "IR Remote ID" in "I/O Control Setup Menu". Used to select a DVR when there is more than one unit. Selecting an incorrect unit ID will prevent the DVR from responding to commands from the remote.

Channel keys #1~16

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salesuk@everfocus.com

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